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USSR Report

HUMAN RESOURCES



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LABOR

EVALUATION OF FARM LABOR QUALITY, INCENTIVES DISCUSSED

Moscow SOTSIALISTICHESKIY TRUD in Russian No 6, Jun 84 pp 43-51

[Article by N. Prokopenko, director of the Belorussian Scientific Research Institute of Economics and Organization of Agriculture, doctor of economics: "The Quality of Agricultural Work: Problems of Assessment and Stimulation"]

[Text] The successful realization of the Food Program of the USSR requires, above all, the attainment of high final results of agricultural production. But high harvests, yields and gains in weight do not come by themselves. In order to obtain them one must work well. To a decisive extent, they depend on a conscientious attitude toward the work and toward the execution of every technical operation. This is especially important in the conditions of the industrial character of contemporary agricultural production and the further division and cooperation of farm labor. Moreover, high harvests, yields and gains in weight must be obtained not at any price, but with minimum expenditures. All of this moves the problem of raising the quality of agricultural labor into the foreground. A multitude of examples testify to how important it is. Let us examine some of them, the most characteristic ones.

Noticeable advances in the development of plant-growing have been called forth to a large extent by the use of mineral fertilizers. Thanks to this, the kolkhozes and sovkhozes of Belorussia are attaining stable harvests of grains exceeding 20 quintals per hectare. Meanwhile the standard recovery of mineral fertilizers, mainly because of the irregularity of their application, is realized approximately by two-thirds. The increase of the quality of the application of mineral fertilizers, in accordance with the calculations of scientists and agronomists, would permit an increase in grain production in the republic of approximately 500,000 tons a year.

In Belorussia the most lucrative sector is animal husbandry. For its successful development a good feed base is needed. The quantity and quality of feeds depends essentially on the observance of the technology of their production and especially procurement. Naturally, losses of feed in these operations is inevitable, but not in the degree as now, when they exceed standard losses several times. The reasons are basically two: The inadequate supply of feed-harvesting equipment and the violation of technological discipline. Calculations show that here, too, enormous reserves are concealed in the increase of the quality of labor. For example, the reduction of the losses of nutritious

substances in feeds by 10 percent through the improvement of the procurement technology would make it possible for the republic to increase the production of milk by almost 1 million tons per year.

A careful analysis of the quality of labor in the application of mineral fertilizers and the production of feed, as well as in many other types of work, shows that its level frequently does not correspond to the technical requirements. A discrepancy is observed between how people can and must work and how they actually work. The explanation of such a widespread negative phenomenon must, apparently, be sought in the incentives which secure the realization of economic interests.

The material and moral incentives in the existing systems of the payment of labor in kolkhozes and sovkhozes, as the main stimulus, are aimed basically at the increase of the volumes of work. Thus, for a tractor operator who applies fertilizer to the soil, wages are credited per ton of "dispersed" fertilizer or per hectares of cultivated area. In the procurement of feeds, the incentives are also aimed mainly at the increase of their quantity. Such a system of incentives has primary application in agriculture, which holds back the increase in the quality of labor, and so, to a certain extent, also complicates the task of the implementation of the Food Program.

This is why the May (1982), June (1983), and December (1983) Plenums of the CPSU Central Committee required the accelerated solution of the problem of the increase of the quality of labor and the quality of all our work. This was also a subject of discussion at the All-Union Economic Conference on Problems of the Agro-Industrial Complex.

The difficulties consist in the fact that, in order to stimulate the quality of agricultural labor, one must have objective criteria for its assessment. Since the quality of labor is manifested in labor operation, it must also be assessed, in our view, in accordance with the degree of accuracy of its execution. This is of particular importance during the contemporary stage, which is characterized by an intensification of the national division of labor, when many workers take part in the production of a product in various of its stages. A high final result is possible only in the presence of the excellent execution of all technical operations.

In the domestic practice of agricultural production, a certain experience in regard to the stimulation of the quality of labor has been accumulated. In many kolkhozes and sovkhozes, additional payment has been introduced for the quality of grain, beef, milk, flax, cotton, sunflower seed, for the quality of sowing, etc. At the same time, these measures do not have a permanent character, frequently they do not have an economic substantiation, and they are applied sporadically.

The task consists in the determination of an index of quality of operation and its numerical expression. The main thing is this--to develop a unified methodological basis for the solution of this problem, unified indicators of the quality of labor, which are reliable and simple in application.

The assessment and stimulation of the quality of labor is one of the most important functions of the complicated system of quality control. Moreover, it also includes the following functions: The planning of production quality; technical and material-technical supply; improvement of labor organization; metrological maintenance of control over the quality of labor and production; certification of production; organization of transportation, preservation, and its sale; selection, placement and training of personnel; legal, normative and also information guarantee of quality. Only the purposeful utilization of all enumerated functions makes it possible to attain the goals: To increase the output of agricultural production in the presence of its high quality. But since all functions are brought into movement by living labor, the increase of its quality is of decisive significance.

In the development of a system for the assessment and stimulation of the quality of labor of direct executors it is necessary to take into account a number of important circumstances that are specific to agriculture. First of all, the system must not be unwieldy and complicated. Secondly, it is highly desirable that it should have a primarily stimulating character, and not only look like a system of penalties. Thirdly, its effectiveness depends essentially on the speed of operation with which it reacts to the quality of labor. Execution discipline increases if the worker knows that his labor simultaneously assessed and rewarded both for quantity and for quality. Fourthly, the stimuli must be aimed not in general at the increase of the quality of labor, but they must be coordinated in so doing with the volume of the work carried out, i. e., the quantity of quality work must be stimulated. Fifthly, the system must contribute to the increase in the effectiveness of the brigade contract, in which the collective responsibility for final results must be connected with the stimulation of the members of the brigades for labor quality.

Technical charts for the output of agricultural production are destined to become a point of departure for the creation of such a system. They indicate the requirements for labor operations. They are simple. But there are almost no labor operations that are practically identical in terms of the level of quality of execution. For various reasons, including subjective ones, deviations of one sort or another from the optimal requirements are always possible. Meanwhile the executors are credited with identical payment for a unit of quantity of different-quality labor, although this inevitably leads to different final results: Hence it is very important to solve the following interrelated tasks: How many levels of labor quality it is necessary to have, what requirements must the upper and lower limits meet, what must be the intervals in these levels and correspondingly in the indicators of quality, by what numerical indicators must they be measured, as well as who will assess the labor of the direct executors and in what intervals will this be done.

Practice convincingly testifies to the fact that the traditional assessments of "excellent", "good", "satisfactory" and "poor" are most intelligible and acceptable. At the same time, of no small significance is the fact that this series of assessments makes it possible to secure their unification and the comparability of the quality of labor and production. The latter, as is well known, is [production] of high grade (excellent), first-grade (good), second-grade (satisfactory), and ungraded (poor).

Labor of the highest quality is the labor of the most skilled and conscientious workers, who guarantee the precise execution of operations in accordance with the requirements of the manufacturing method for the given conditions of production. An excellent assessment signifies the one-hundred-percent level of possible labor quality--the coefficient 1.0 (100 percent). The lowest admissible quality of labor is that level beyond which defective output begins. The research of the Belorussian Scientific Research Institute for Economics and Organization of Agriculture (BelNIIEOSKh) showed that the coefficient 0.8 (80 percent) corresponds to it in contemporary conditions.

It is exceedingly important to determine the base indicator of quality, for the exceeding of which incentives must be given. The research and practical experience testifies to the fact that the level of quality being planned corresponds best to the requirements of this indicator. It is formed from the average-attained indicator and planned growth. Its magnitude, calculated with regard to technological and economic parameters of labor processes, comes to 0.9 (90 percent). Such a level of quality is simultaneously practical and attainable for the majority of workers. The principle of measurement and assessment that has been set forth is entirely acceptable. This is evidenced by the experience of the kolkhozes and sovkhozes of the RSFSR, the UkSSR, the BSSR, the MSSR, the LaSSR, and the KiSSR.

The effectiveness of the use of the system of the quality control of labor and production depends on who undertakes the assessment. Practice shows that those cope best with this task who accept the finished work--the directors or accounting clerks of the production subdivisions. In any case, they are obliged to determine how the work is carried out. An enormous number of examples confirm that the possibility granted to the director of the production subdivision to assess the quality of the work of the executor on the basis of objective criteria is an important means of control and an effective method of influencing the improvement of the quality of labor. The frequency of the assessment of labor quality may be adopted differently: Daily, once every 5 or 10 days, depending on the state of technical discipline and the volume of parameters taken into account.

Assessment charts of work quality are best used for this. They indicate the executors, types of work, requirements made with respect to them, methods for determining quality, etc.

In searching for objective criteria and forms of assessment of labor quality, it is necessary to proceed from the following: In the technical processes of agricultural production, which are inseparably linked and mutually interdependent, the significance of the quality of every element of labor operations in a decisive manner influences the quantitative and qualitative indicators of the final product. And the higher the level of production, the greater the extent to which quality depends on the preciseness of the execution of every operation along the entire technological chain.

The effectiveness of the application of the systems of the quality control of labor is determined not only by a comprehensive calculation of all its factors, but also by the utilization of the mechanism constructed with such a calcula-

tion, so as to guarantee its reliability and sufficiently high coefficient of useful operation. These requirements are most fully met by the principle of the comprehensive assessment of quality, when the degree of preciseness of the execution of the labor operation and its actual influence on the final result are determined with the aid of coefficients expressed in numerical values.

The solution of the problem of stimulating the labor quality of the direct executors is also promoted to some extent by the effective provisions concerning its payment, which envisage additional rewards for the execution of the most important work with good quality. However, in practice everything is reduced to the assessment of the commission on quality after the completion of the regular agricultural campaign for the execution of work in agriculture, and, as a result, it is often given formally. The payment of the reward is detached from the moment of the fulfillment of work, which, in our view, to a significant extent lowers the stimulating role of the incentive. Moreover, if additional payment is credited, it relates to those types of work which are carried out during the most strenuous periods.

Different variants are possible for the stimulation of the quality of agricultural labor. The first consists in the differentiation of the direct payment depending on the coefficient of labor quality obtained. In so doing, in case of a good assessment (0.9) the wage rate is preserved unchanged, in the case of an excellent assessment (1.0) it increases by several percent and in the case of an unsatisfactory assessment (0.8) it decreases.

The method of differentiation of the direct payment according to labor quality is going through experimental verification at the Kolkhoz imeni Yakub Kolos of the Stolbtsovskiy Rayon of Minsk Oblast and, according to preliminary data, has shown a high degree of influence. Experience with differentiation of the direct payment according to labor quality has been accumulated in farms of the Krasnodar Kray and other regions of the country.

A second and more widespread variant of the stimulation of quality is based on additional payment, which at first is distributed in proportion to the basic wage, and then differentiated in accordance with the indicator of the coefficient of labor quality.

The magnitude of material incentive is established in the following correlations (Table 1).

Table 1. Correlations of Labor Quality Coefficients and Material Incentives

Коэффициент качества (1)	Размер материального поощрения % (2)	Коэффициент качества (1)	Размер материального поощрения % (2)
1.0—0.97	150	0.88—0.85	75
0.96—0.93	125	0.84—0.80	50
0.92—0.89	100		

Key:

1. Quality Coefficient 2. Scale of Material Incentive, in %

Depending on concrete conditions, type of production, and level of economics of the farm, the scale of material incentive may be increased or decreased.

Initial data for the crediting of additional payment are the coefficient of labor quality, the scale of material incentive, the total sum of additional payment for the production subdivision, and the basic wage of the executors. This method offers a certain interest particularly for dairy farms, in the majority of which in the BSSR a system of quality control of labor and production has been introduced. Let us assume that 10 operators for the milking of cows are working and that the basic wage of each one of them is 160 rubles per month. For the sale of milk of top quality, the collective is assigned another 400 rubles in additional payment. If the quality of labor and production is not taken into account, this sum must be distributed proportionately to the basic wage. Then the basic and additional payment comes to 200

Table 2. Method of Calculation of Payment for Quantity and Quality of the Labor of Workers of a Dairy-Product Farm per Month

(2) №	(3) Фамилия и инициалы	(4) Основная и дополни- тельная оплата без учета коэффи- циента качества, руб.	(1) С учетом коэффициента качества труда					(10) Соотноше- ние оплаты с учетом коэффи- циента и без него, %	(11) Отно- шение к ниж- нему уровню	
			(5) Сред- ний коэф- фици- ент ка- чества труда	(6) Раз- мер ма- тери- ально- го по- ощре- ния, %	(7) Условно- оплата, скоррек- тирован- ная на коэффи- циент ка- чества, руб.	(8) Дополни- тельная оплата за качество труда, руб.	(9) Сумма основной и дополни- тельной оплаты, руб.			
(12)										
1.	Петров А. И.	200	1,00	150	240	64,86	224,87	112,4	123,8	
	• • • • •	200	0,98	150	240	64,86	224,87	112,4	123,8	
	• • • • •	200	0,96	125	200	54,06	214,06	107,0	117,9	
	• • • • •	200	0,92	100	160	43,26	203,25	101,6	111,9	
	• • • • •	200	0,89	100	160	43,26	203,25	101,6	111,9	
	• • • • •	200	0,87	75	120	32,42	192,42	96,2	105,9	
	• • • • •	200	0,85	75	120	32,42	192,42	96,2	105,9	
	• • • • •	200	0,84	50	80	21,62	181,62	90,8	100	
	• • • • •	200	0,82	50	80	21,62	181,62	90,8	100	
	• • • • •	200	0,80	50	80	21,62	181,62	90,8	100	
(13) Итого		2000	—	—	1480	400	2000	—	—	

Key:

- | | |
|---|--|
| 1. Taking into Account the Labor Quality Coefficient | 8. Additional Payment for Quality of Work, in Rubles |
| 2. No. | 9. Sum of Basic and Additional Payment, in Rubles |
| 3. Last Name and Initials | 10. Correlation of Payment With Regard to Coefficient and Without It |
| 4. Basic and Additional Payment Without Regard to the Coefficient of Quality, in Rubles | 11. Relationship to the Lower Level |
| 5. Average Coefficient of Labor Quality | 12. Petrov, A. I. |
| 6. Scale of Material Incentive, in % | 13. Total |
| 7. Standard Payment, Corrected for Quality Coefficient, in Rubles | |

rubles for everybody.

According to the method developed by the BelNIIEOSKh, the additional payment is distributed as follows: In accordance with the average monthly coefficient of labor quality, the basic wage of every executor is increased by the scale of material incentive, then the results are added up and the sum is divided by 100. In this way we obtain the standard payment corrected for the coefficient of labor quality.

$$y_0 = \sum_{i=1}^n O_i M_i$$

where O_i is the basic payment;

M_i is the scale of material incentive;

i is the ordinal number of the indicator.

In our example, two operators received the right to material incentive in the amount of 150 percent, one--125 percent, two--100 percent, two--75 percent, and three--50 percent. Then the standard payment (y_0) will equal 1,480 rubles. Then the magnitude of the additional payment is divided by this sum, which makes it possible to determine the standard for bonus payments ($400 \div 1,480 = 0.2702702$). After multiplying it by the standard wage of every operator, we obtain the scale of his additional payment (Table 2).

For those who did excellent work, the additional payment amounts to $160 \times 150 \times 0.2702702 = 64.86$ rubles, for those who did satisfactory work-- $160 \times 150 \times 0.2702702 = 21.62$ rubles, or two-thirds less.

This method of calculation allows the precise integration of any correlation of work, assessed by different coefficients, into an assigned sum of bonus payments.

However, in the solution of the problem of the stimulation of labor quality, there are significant difficulties, which consist in the fact that the fund for bonus payments for labor quality is formed extremely unevenly. Thus, the material incentive fund (FMP) in sovkhoses is formed in the amount of 15 percent of the planned and 7.5 percent of the above-plan profit, in kolkhoses it amounts to 15 percent of the sum of the net profit. As is apparent, the magnitude of the fund depends very little on the quality of production, with executors in low-profit farms who do excellent work and turn out high-quality production suffering because of its absence. For this reason it would be expedient to form the material incentive fund for the stimulation of labor quality in all farms on the basis of types of production.

Exceedingly important is the fact that with the contemporary level of comprehensive mechanization of dairy cattle-breeding, which permits a substantial increase in the labor productivity of farm workers, the assignments for the sale of high-quality milk are sufficient for the stimulation of the labor quality of all executors, guaranteeing full-fledged operation of production. Thus, in the Stayki Sovkhoz of the Vileyskiy Rayon of Minsk Oblast in 1977 38.3 percent were used for the stimulation of the labor quality of milkmaids, in 1978--49.3 percent, in 1979--54.1 percent, and in 1980--56.5 percent of the assignments, which, calculated per ruble of basic wages, amounted to 7.6;

10.3; 11.9; and 12.1 kopecks each. According to our calculations, the remaining sum is sufficient to pay the workers in feed production for labor quality correspondingly in the amount of 4.1; 3.4; 9.9; and 10.1 kopecks per rutie of basic wages. The increase in the level of mechanization of processes in feed production will make it possible to reduce labor expenditures and to increase additional payments for labor quality.

For the daily stimulation of labor quality, some farms have begun to allot part of the means from the general wage fund for final results. They are specified in the cost accounting targets of the brigades and are used strictly in accordance with special purpose designation. Such a practice is conducive to the increase of the yield of agricultural crops and the productivity of animal husbandry.

Of extraordinarily great significance for agriculture is the utilization of advanced technologies for the output of production and the development of a mechanism that would guarantee the preciseness of the execution of labor operations. Unfortunately, the technical processes are regulated by such non-mandatory prescriptions for execution as recommendations. Moreover, a multitude of them is published for separate operations and it is almost impossible to compose an integral technology from them. For this reason, every specialist frequently operates according to his own discretion.

Scientific institutions, in generalizing their research, as usual give out primarily the same non-mandatory recommendation for execution to kolkhozes and sovkhoses. The result is that they do not bear responsibility for the results of their introduction, and the union of science and practice in life looks extremely flimsy, one can say conditional. And that is a pity! On such an unstable basis it is rather difficult for scientific-technical progress to develop in the country. If tested scientific developments are integrated in normative documents stipulating mandatory execution, both science and production will profit from this.

According to the strengthening of the material-technical base of agriculture, the stability of the conditions of production grows consistently, both in animal husbandry, especially in poultry-farming, hog-breeding, and in the sector for the fattening of cattle on an industrial basis, and in plant-growing. All of this permits the utilization of standard technologies of intensive character on the basis of standards allowing only their individual corrections. In this case, the system will act as a complex of measures, rules and requirements set forth in the GOST's (All-Union State Standards), the obligatory nature of whose execution is stipulated by the appropriate legal acts. Standards can effectively become the organizational-methodical basis of the complex system of the control of the quality of labor and production. It is very important for all scientific research to be crowned with their development and approval.

The Belorussian Scientific Research Institute of Economics and Organization of Agriculture, jointly with the institutes and co-executors, in conformity with the program of work approved by the USSR State Committee for Science and Technology, has developed and secured experimental verification of the stan-

dards for the technological processes of the production of milk, beef, pork, grain, flax, potatoes, and other products. Here, for example, is the content of the standard for the cultivation of long-fiber flax. To begin with, it establishes general agro-technical requirements for the cultivation of this crop with a concrete accounting yield. Soil requirements are determined. The standard determines the periodicity of the sowing of flax in one section, the terms of allotting the section to sown crops. The requirements for the cultivation of the soil provide for the type and terms of cultivation, both during the spring and during the fall. The doses and composition of mineral fertilizers are established according to the accumulation of nutritious substances in the soil and the magnitude of the yield being planned. The optimal levels of acidity of the turf-podzol soils sown to flax are determined, as well as the norms for the introduction of lime with the simultaneous increase of the doses of potassium fertilizers. The terms and duration of sowing are indicated, as well as the sowing norms and the depth of the placement of the seeds. Requirements are established for taking care of the crops, for the fight against weeds, pests and diseases, for the harvest and sale of flax.

In the standard for the production of beef the architectural-plan parameters for livestock facilities, requirements with respect to the micro-climate (depending on the age of the animals), illumination norms, etc. are indicated. Special requirements are provided for with respect to the transport of calves to the complex, in regard to the maintenance and care of the animals, the feeding and watering of cattle. The part of the standard with respect to the systems of feeding and requirements of feed calculated per head for the entire period of rearing and fattening, etc. has been carefully developed. The standard indicates the requirements with respect to the mechanization of the production processes and the technical servicing of machines and equipment, as well as with respect to the veterinary-sanitation and preventive measures in complexes for the production of beef. It must be noted that a reliable mechanism leading to movement has been integrated--this is the indicators, the methods of assessment and stimulation of the quality of the technical operations.

All standards for technological processes have gone through experimental verification in base farms and have shown a rather high effectiveness. The results of the introduction of the standards have been given a high assessment by the commission of the USSR State Committee for Science and Technology, the USSR Ministry of Agriculture, the Academy of Agricultural Sciences imeni V. I. Lenin, and the USSR State Committee for Standards, which has verified the base farms. Thus, in the Kolkhoz imeni M. V. Frunze of the Shklovskiy Rayon of Mogilev Oblast the standard for technological processes in the hog-breeding complex for 12,000 head began to be applied in 1981. Such data (Table 3) testify to the results of its use.

For higher labor quality, the operators of the complex in 1981 received 2,200 rubles, in 1982--6,500 rubles, including M. P. Roganova--264 rubles, M. F. Urbacheva--197 rubles, R. M. Zhuravleva--195 rubles, and M. I. Kos'yanova--182 rubles. It is characteristic that during the verification of the utilization of the standard by the commission all workers of the complex were examined with respect to the expediency of the application of the standard and all of them indicated that it is useful, that it disciplines the executors and increases their assiduity.

Table 3. Results of the Use of Standards for Technological Processes in Hog-Breeding

(1) Показатели	1980 г	1981 г	1982 г	1982 г в % к 1980 г (2)
(3) поголовье свиней	12 599	12 978	13 975	110,7
(4) Получено поросят	11 982	13 692	16 406	136,9
(5) Получено поросят на одну свиноматку	14,1	18,47	20,6	146,1
(6) Валовое производство свинины, ц	7 744	9 540	11 391	147,1
(7) Расход кормов на 1 ц привеса, ц корм. ед.	9,8	7,3	6,8	69,4
(8) Реализовано свинины, ц	8 002	8 102	11 248	140,1
(9) В том числе:				
(10) I категории	629	1 202	3 015	479,3
(11) II категории	3 694	3 430	4 340	117,5
(12) III категории	3 679	3 055	2 543	69,1
(13) Уровень рентабельности, %	22,5	36,7	46,1	204,9

Key:

- | | |
|--|----------------------------------|
| 1. Indicators | 8. Pork sold, in quintals |
| 2. 1982 as % of 1980 | 9. Including: |
| 3. Livestock of hogs | 10. 1st category |
| 4. Sucking-pigs received | 11. 2nd category |
| 5. Sucking-pigs received per sow | 12. 3rd category |
| 6. Gross production of pork, in quintals | 13. Level of profitability, in % |
| 7. Expenditure of feed per 1 quintal of weight gain and feeding unit | |

Here is still another example of the effective use of standards.

The lands in the Kolkhoz Put' k kommunizmu [Road to Communism] of Minsk Oblast are not rich, basically they are sand loam. Its managers turned to us with the request to extend assistance in increasing the yield of the chief grain crop--winter rye. Jointly with other scientific research organizations of the republic, standards for the standard processes of the cultivation of this crop were developed. This is document calling for mandatory execution, which provides not only for the optimal parameters of the technology of winter rye production, but also the assessment of labor quality.

The managing board of the kolkhoz organized the study of the questions of the observation of the standard. The training of the personnel was carried out in periods: Before the spring field work, during the caring of agricultural plants, and before the harvesting of grains. For the calculation of the quality of labor, an accounting sheet for a tractor-engine operator (Agricultural Accounting Form 676) is being used at the farm. During the harvest, every combine operator, in addition, has on his hands a record of the quality of work performed, in which the appropriate assessments are entered on a daily basis.

The standards provide for a number of indicators with respect to the assessment of the quality of labor. Thus, in the harvest of grains through direct combin-

ing, the quality indicators are the amounts of grain losses, its shattering, the height of the stubble-field, the evenness of the piling of straw in the field. The amounts of grain losses in the assessment of labor quality are set according to the conditions of the harvest--favorable, average, and difficult, in which the lying down of the grain, the moisture and weather conditions are taken into account.

The results of the application of standards for the cultivation of winter rye in the Kolkhoz Put' k kommunizmu are following: If in 1981 the farm obtained winter rye grain at 22.7 quintals per hectare, with the use of the standard in 1982--24.7 quintals per hectare, and in 1983--27 quintals per hectare on an area of 470 hectares. By virtue of the more rational organization of labor on the basis of standards, the combination of several types of work in one passage of the machinery, and other progressive methods, the expenditures per hectare diminished by almost 70 rubles.

Thus, the standards really become an effective instrument for the introduction of progressive technologies, the increase of technological discipline and, on this basis, of a significant increase in the output of high-quality production. Their development is being continued and improved. At the same time, as experience has shown, the effectiveness of the application of standards depends directly on the degree of training of the personnel for this important task. For this reason, standardization must be taught to the personnel in agriculture; this is especially important for specialists and farm managers. It is expedient to begin the study of the foundations of standardization in agricultural VUZ's and tekhnikums.

For the increase of the quality of agricultural labor, its organization is of great significance. Moreover, it is extremely important to define, at every stage of the development of agriculture, precisely such a form of labor organization that would permit the securing of technological discipline at a high level. In the contemporary stage, the collective contract is such a form. What is its strength? Being based on cost accounting and being aimed at final results, it is capable of providing new impulses to the increase of labor quality.

In the effective realization of the collective contract, a decisive role is assigned to the stimulation and especially to the advancement of labor. Without a doubt, the total payment depends on the fulfillment of the task in regard to the output of production, which is the result of the activity. And here insufficiently thought-out advancement, i. e., the stimulation of labor on a monthly basis, can inflict serious damage to the collective contract. At the same time, there is no common treatment of the problem. Here two variants of advancement are possible: Temporary or taking into account individual labor productivity.

In the selection of the form of advancement, the members of the collective, no doubt, should have a decisive say. Thus, the members of the mechanized brigade in the Kolkhoz imeni V. V. Kuybyshev of the Pukhovichskiy Rayon of Minsk Oblast are credited with an advance on the basis of skill categories. In the calculation of the wage of machine operators for every month worked on the farm, a coefficient of labor participation is taken into account, the

magnitude of which is determined as the ratio of time actually worked during the month to standard time. For example, if a machine operator in the course of a month worked for 24 days when the standard is 20, his coefficient of labor participation is equal to 1.2 (24:20). Therefore, in the presence of skill category V, to which a rate of 5 rubles corresponds on the farm, the wage as per norm, corrected by the coefficient of labor participation, will come to 6 rubles. Along with the time worked, the wage of the machine operator takes into account the volume and quality of the work. For this, the appraisal, corrected by the coefficient of labor participation, is increased by the norm-shifts and the coefficient of quality, determined in accordance with the method of the Belorussian Scientific Research Institute of Economics and Organization of Agriculture.

Practice has shown that because of the different level of the qualification and conscientiousness of the executors the quality of their labor differs, and for this reason it requires corresponding assessment and stimulation. This was understood by the members of links or brigades themselves, who are working on the basis of the principles of the collective contract, and for this reason adopted labor quality control systems.

In the Sovkhoz Subbotniki of the Iv'yevskiy Rayon of Grodno Oblast, the coefficient of labor participation is also applied for the calculation of the labor of every machine operator in production output. At the beginning of the work day, the brigade leader makes out an itinerary sheet for the machine operator, in which the place of work, type of work, and the output norm are indicated. At the end of the day, the itinerary sheet is given to the accountant, and he fills in the work record. The work record states the coefficient of labor participation, taking into account the fulfillment of the output norms. For example, the output norm for ploughing with an MTZ tractor is 5 hectares. A tractor operator ploughed 6 hectares. For this day, his coefficient of labor participation is 1.2. The tractor operator is given the [skill] category IV with a wage of 5.73 rubles. Consequently, the amount of the advance for this day is 6.88 rubles (5.73 x 1.2). Then at the end of the month all the coefficients of labor participation are counted up and the question of the category of the tractor operator is decided at the brigade council. Such calculation of labor disciplines the machine operators and is conducive to the increase of labor quality.

In the kolkhozes imeni Dimitrova of Tolochinskiy Rayon of Vitebsk Oblast, Druzhba of Dobrushskiy Rayon of Gomel Oblast, and a number of others, where comparatively small contract collectives have been formed with approximately similar composition of machine operators, which are psychologically compatible and disciplined, with an equally honest attitude toward work, time-rate advances are applied for the quantity of shifts worked.

With the introduction of the collective contract, there is a substantial increase in the role of standards for the technological processes in plant-growing and animal husbandry. As experience has shown, it is advantageous for the work groups to adopt approved technologies. Standards are laconic and not cumbersome, they inspire confidence. This is why the BSSR Ministry of Agriculture has recommended their adoption in the kolkhozes and sovkhozes of the republic.

The increase of the quality of agricultural labor is a complicated problem. The successful realization of the Food Program depends to a large extent on its solution.

From the Editors. The author touched on the important problem connected with the strengthening of the stimulation of labor quality in the achievement of high final results of agricultural production. However, one cannot agree with all of his proposals. In connection with this, the editors invite kolkhoz and sovkhoz workers, the rayon agro-industrial associations, scientists, and all readers of the journal to take part in the discussion of the questions touched on, which will make it possible to find their correct solution.

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LABOR

INCENTIVE TO INCREASE PRODUCTION WITH SMALLER STAFFS SOUGHT

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[Article by V. Rzheshhevskiy, deputy chief of a department of the USSR Gosplan: "Increasing Incentive of Labor Collectives in Working with Smaller Staffs"]

[Text] As of this year, in accordance with party and government decisions, more than 700 enterprises of the Ministry of Heavy and Transport Machine Building [Mintyazhmash], the Ministry of the Electrical Equipment Industry [Minelektrotekhprom], the Ministry of the Food Industry [Minpishcheprom] of the Ukrainian SSR, the Ministry of Light Industry [Minlegprom] of the Belorussian SSR and the Ministry of Local Industry [Minmestprom] of the Lithuanian SSR began an economic experiment in using additional measures directed at expanding the rights of enterprises and associations in planning and economic activity and in intensifying their responsibility for work results. The aim of the experiment--to create economic conditions, which would increase the incentive and raise the responsibility of labor collectives in accelerating production efficiency, rational use of allocated resources and in raising the technical level of manufacture and production.

For intensifying production and increasing its efficiency under contemporary conditions, it is very important to increase the yield of operating enterprises. Therefore, it is necessary, first of all, to continue improvement of planning and economic management on the basis of raising the role and responsibility for the expanded socialist reproduction of the basic link of physical production--associations and enterprises--and also bearing in mind to reorganize, proceeding from this, the functions of all other links of the economic system.

Increasing the incentive of labor collectives in working with smaller number of personnel is one of the main tasks aimed at improving the economic mechanism, solution of which is provided for by the experiment.

The establishment of close dependence of the amounts of a wage fund on the final activity results of labor collectives is made possible by formation of a wage fund [FZP] on the basis of economic norms and achieved work indicators. It is permitted with consideration of specifics of production to use one of the following norms in forming a wage fund, which ensure increased production output per ruble of a wage fund by years of a five-year plan: a wage fund increment norm for every percent of increase in the overall volume of production; a wage norm per unit of production in physical terms; and a wage norm per ruble of

production. In establishing norms, the incentive of a collective in the increase of labor productivity as well as in adherence to the economically based relationship between the increase of labor productivity and average wages must be ensured. The wage fund formation norms will be determined according to normative net production (net production) or other indicators, which reflect more precisely labor expenditure and saving of material resources, and in necessary cases according to commodity production or production output in physical terms. Here it is necessary to determine more precisely the indicator of net production norm and to strengthen control over its use.

How will the wage fund increment norm for increase of production be used, what is new in it?

The first distinctive feature consists in that in using it the overall wage fund is formed from two parts: the amount of the basic fund and the amount of its increment, calculated according to a norm for every percent of production increase. The indicated norm will be established, as a rule, proceeding from the total increase of production through an increase of labor productivity and adherence to relationship between an increase of labor productivity and average wages in industry, which is provided by the control figures of a five-year plan. Since a wage increment norm per ruble of production increase is one-third to one-fourth less than the level of expenditure of wages per ruble of production, which is invested in a basic year, its use ensures during an increase in production a steady reduction in the overall expenditure of the wage fund per ruble of production as a whole.

The new approach to forming an overall labor wage fund and to determining norms makes it possible:

to create reliability in retaining the achieved level of a wage fund, which opens real possibilities for using the Shchekin experience; and

to ensure adherence to the proportions laid in the norms between the increase of labor productivity, production and average wages by years of a five-year plan during changes in the rate of growth in the volume of production and in labor productivity in annual plans (see the Table).

The presently used norms do not ensure the indicated conditions. They are based on specific values of tasks for increase of production, labor productivity and average wages, which are provided for one or another year of a five-year plan. Therefore, during changes, let us assume, in the increase of production volume in an annual plan compared to a five-year plan, the norms become inapplicable: they are groundlessly strict during reductions in annual plans for production volumes against five-year plan tasks and excessively generous during surpassing of these rates.

The second distinctive feature in using the new norms consists in that a special order has been established for advance payment and subsequent paying off by enterprises of a supplementary wage fund, which is necessary for paying wages to workers engaged in the mastery of new capacities. It is known that

newly commissioned capacities--a shop, a sector and sets of machines--are not mastered to full capacity immediately, but still require to be completely staffed by manpower. A situation arises temporarily, during which an enterprise requires a wage fund that is much greater than it should have according to the norm of production being turned out.

Calculation of Wage Fund with the Use of the Increment Norm

(Example)

(1) Показатели	(2) Базовый год	(3) Варианты расчета в планируемом году			
		I	II	III	IV
(4) Объем производства, млн. руб.	1000	1010	1020	1030	1040
(5) Темп роста, %	—	101	102	103	104
(6) Темп прироста, %	—	1	2	3	4
(7) Фонд заработной платы базового года, млн. руб.	200	200	200	200	200
(8) Прирост фонда заработной платы, млн. руб.	—	+0.6*	+0.2	+1.8	+2.4
(9) Фонд заработной платы — всего, млн. руб.	200	200.6	201.2	201.8	202.4
(10) Затраты заработной платы на 1 руб. объема производства, коп.	20.00	19.86	19.73	19.59	19.46
(11) Справочно:					
(12) Норматив прироста заработной платы:					
(13) на 1 % прироста объема, % фонда заработной платы базового года	0.3	0.3	0.3	0.3	0.3
(14) на 1 руб., коп.	—	6.0	6.0	6.0	6.0

(15) * Первый год: 0.3×1.0 млн. = 0.3 млн. руб. прироста фонда заработной платы и т. д.

Key:

1. Indicators
2. Basic year
3. Versions of calculation in a planned year
4. Volume of production, millions of rubles
5. Rate of growth, %
6. Rate of increment, %
7. Wage fund of a basic year, millions of rubles
8. Wage fund increment, millions of rubles
9. Wage fund--in all, millions of rubles
10. Expenditure of wages per R1 of production volume, kopecks
11. As reference:
12. Wage increment norm:
13. Per 1 percent of volume increase
14. Percent of wage fund of a basic year per R1, kopecks
15. First year: $R0.3 \times 1.0$ million = R0.6 million of wage fund increment and so forth

It is true that such a situation was also taken into account formerly, but only in norms calculated on the basis of a five-year plan of an enterprise with distribution of tasks by years. Let us concede that if in the fourth quarter of the third year of a five-year plan the commissioning of new capacities was envisaged, then the wage norm being confirmed for this year was taken into account by the indicated fact. But during any change in the periods for commissioning of new capacities in annual plans compared with a five-year plan, the norm became useless and was revised, that is in effect it was abolished.

Under the new conditions it is provided that enterprises, which are commissioning and mastering new capacities, are to be allocated a supplementary wage fund to pay wages to workers who are engaged in mastering these capacities. It is taken into account in the labor plan separately until it is recovered through an increase of the wage fund calculated according to a confirmed norm for increase of production. The wage fund, which is needed to pay workers engaged in mastering capacities, can now be received not when it was provided for in a five-year plan, but in realistic periods that are clarified in the plan for a regular year. Moreover, this fund is not provided free of charge but must be recovered through corresponding increase of production during subsequent plan periods. Thus, conditions have been created here for fundamental strengthening of planning discipline.

The third distinctive feature of the increment norm consists in that it acts in conjunction with the task for increasing labor productivity, which is confirmed in an annual plan. Thus, the basic wage fund of enterprises and associations is preserved under the condition that the increase of labor productivity in an annual plan will exceed or equal the average annual increase in 5 years, which precede the plan year. If this condition is not adhered to, the wage fund of the basic year will decrease according to norm for every percent of reduction of labor productivity in an annual plan against the average annual rate of growth of this indicator in 5 years, which precede the plan year.

The sense of this measure is in the fact that it motivates enterprises to use existing reserves with maximum effect and to steadily increase labor productivity. Let us examine this on an example. Let us assume that in the preceding 5 years the increase of labor productivity at an enterprise amounted to 5 percent a year with the increase in the volume of production (for normative net production) also amounting to 5 percent. A situation develops in a plan year, during which in connection with the change in demand for certain kinds of production, only 1 percent of increase in the volume of production is planned. Formerly such reduction in the rate of volume increase would have been received by an enterprise with complete calm, since it preserves the basic wage fund and would also receive a small increase in the wage fund according to norm for 1 percent of production increase.

Average wages are also preserved, and there are far less worries with such an insignificant task for increasing production. Moreover, in the absence of the condition being examined, some supervisors of enterprises would have simply fought off the inclusion of the production volume increase in the plan.

It is another matter under the conditions of an experiment. In our example an enterprise is faced with a dilemma--either to lose a part of the wage fund and reduce average wages of workers, or find a possibility for preserving the achieved rate of increase of labor productivity. The first way, obviously, is unacceptable either by a labor collective or by enterprise management.

As regards the second way, then there are various versions here. It is possible to release some workers (in our example it is 3 percent of the number) and increase average wages of remaining workers by 3 percent. This is advantageous both for an enterprise and the state. For a collective of an enterprise because all savings of the wage fund in connection with the release of workers remains at its disposal, and for the state because the people thus released can be drawn into expanding production in another place.

But the withdrawal of the number is not always possible and expedient. Then the necessary workload of an enterprise must be ensured, and the missing volume of work must be found. The experience in developing the draft plan for 1984 under new conditions proves that enterprises have such possibilities.

Finally, enterprises can solve the task partially by reducing the number of personnel, and in all other respects through additional increase of production.

Specific forms, which motivate labor collectives to use internal reserves more fully, will obviously be made more precise and improved during the process of the experiment. However, all of them will be aimed so that wages are "earned" not only by every individual worker but by a collective as a whole.

The fourth distinctive feature of wage increment norms for every percent of increase of production consists in that they can be unified for groups of sectors of industry, differentiated only by taking into account an insignificant number of factors, such as the correlation of the constant and variable (depending on the production volume increase) parts of the wage fund. Today, the main thing is not so much the value of a norm and the accuracy of its calculations, as a firm commitment by a higher organization not to change this norm in all cases, including at the time when an enterprise begins "earning" more with its aid than was provided for in estimates.

The norms used today are exclusively individual for every enterprise: its own norm is fixed for every year of a five-year plan. They are confirmed by a higher organization, which has the right to revise them. This order of developing and confirming norms reduces them to the level of an ordinary indicator, and they become a subject of an annual "bargaining" between a higher organization and an enterprise. But the unity of norms raises their authority and stability.

The possibility of using for groups of unified wage increment norms for every percent of increase of production is created, first of all, by the fact that they are relative values. The expenditure of wages per ruble of production in kopecks is always individual, since the correlation between the volume of production and wages is also individual and depends on the structure of produc-

tion. Thus, one textile factory has its own spinning production, the other one receives its yarn from a distance, one plant ensures itself with castings and forgings independently, the other one receives them through cooperation, one enterprise has large design and industrial services, the other one receives designs and industrial developments from a distance and so forth. There are many more such combinations.

It is another matter when the increment norm is used. The basic wage fund is stable and reflects the developed conditions of production. If the conditions should change, such as new capacities being commissioned, than a supplementary wage fund is provided, which is then included in the basic fund. The increment norm is relative--it expresses the share of increment of the basic wage fund for every percent of increase of production. In this way, while being unified, it at the same time takes into account all individual differences in production conditions that have developed at various enterprises. We may be disagreed with: "Very well, the production structure is indeed relatively stable, and its possible changes are taken into account during commissioning of new capacities." However, not only the production structure but the structure of output is also changed. The less material-intensive replaces the more material-intensive and so forth. These changes occur rapidly and can be significant. In this case the increase in the value of manufactured production (commodity production) will not coincide with the increase in its labor intensiveness, that is with the actual need for a supplementary wage fund. And such a discrepancy is not an exception but a rule. But then the increment norm will also yield an incorrect result. Yes, this is so. So in order to exclude the influence of this factor, the wage fund increment norms are established, as a rule, not for an increase of commodity (gross) or realized production, but for every percent of increase of net (normative) production.

A production volume indicator, calculated in wholesale prices (commodity production), reflects the full value of manufactured articles, that is "own" labor at an enterprise and "someone else's" material resources which are received from a distance. The higher the value of materials or semimanufactures acquired from a distance, the greater the production volume calculated in wholesale prices, that is gross, commodity and realized production.

In planning labor (labor productivity, number of workers and the wage fund), enterprises, whose material-intensiveness of production increases, gain undeservedly and enterprises, whose material-intensiveness declines, lose. As a whole a tendency has developed under which enterprises were interested in increasing the material-intensiveness of production.

A net production norm indicator [NChP] was introduced to overcome the aforementioned shortcomings. Net production norms are a part of a centrally confirmed wholesale price from which expenditures for materials are excluded. Therefore, the increase or decline of the production volume, which is calculated according to net production norms, does not depend on the changes of the material-intensiveness of manufactured articles and reflects own labor expenditures of enterprises more accurately.

Thus, for planning labor productivity and the wage fund this indicator is the best for the majority of sectors at the present time.

However, this does not mean that the net production norm indicator should not be improved. For example, the substantial deviations in planning and accounting indicators according to net production norms are connected with the lack of sufficient experience in planning, the so-called "other production" which amounts from 2 to 17 percent of overall production volume in sectors of industry. The indicated shortcomings in the practical use of the net production norm indicator can and must be eliminated in the near future.

At the same time, in our opinion, there is also an urgent necessity for a more deeper improvement of this indicator proceeding from its new role--to serve as a means for comparing the rate of increase of labor productivity and the indicator which is used in allocating funds for wages. To the extent that under conditions of the experiment the volume of production and the rate of its increase are measured in wholesale prices, that is for commodity (realized) production, then the net production norms, which are used for measuring labor indicators, can be drawn to a much closer degree than at present to actual labor expenditures of every specific enterprise.

Net production norms, as a rule, are a part of a wholesale price and are confirmed in price lists. This is expedient and even necessary, for it was considered absurd to have different norms as well as wholesale prices for the same products, which were produced at different plants under different expenditures of labor and costs of production. Expenditures of labor and costs can be different, moreover, they can coincide only by chance, but a price and, consequently, a net production norm as well must be the same. This is an incontestable requirement for measuring the volume of production. But it is not difficult to note that it is precisely this requirement, which is necessary for the fulfillment of one function--measuring the volume of production, makes the net production norms detrimental to a certain degree for fulfilling another function, which is the main one at that--to serve as a standard of labor intensiveness of production.

Actually, the average sectorial net production norms, which are set in the price lists, make manufactured articles of diverse advantage for reasons which have nothing to do with the activity of one or another specific enterprise. This diverse advantage consists in the fact that for every manufactured article the relationship of its actual labor intensiveness at a given plant to a normative one, which forms the basis of the price list average sectorial norm, is different. Moreover, it manifests itself regardless of a given collective and right after the publication of a price list.

Thus, on becoming a part of a wholesale price, the new indicator is still on the threshold, suffers old defects during its confirmation and during assortment shifts can yield improved indicators when there is real deterioration of work.

It is possible to eliminate the beginning diverse advantage of manufactured articles according to net production norm indicator by abandoning confirmation

of average sectorial norms in the price lists and converting to individual norms for every enterprise. To a considerable extent such norms will meet their main purpose--to serve as a means for measuring the dynamics of own labor expenditures of a given enterprise. The matter is also in that the indicator of the production volume in normative net production in its dynamics over a more or less prolonged period, for example, over 3-4 years, and under certain conditions also over a much shorter period, does not reflect the actual increase of production and labor productivity at enterprises.

Let us briefly recall the history of the question. Net production norms for every manufactured article were determined as an amount of wages and profit according to the norm for every manufactured article, that is in the amounts as it was taken into account in a plant's planning calculation for the year at the beginning of the experiment. Norms were also determined by another method--material expenditures and amortization in the amounts, which were provided in planning calculations, were excluded from the wholesale price of an article. However, both of the aforementioned methods still did not make it possible to free the new indicator from the influence of the differing material-intensiveness of manufactured articles, since the profit in calculation during the setting of the price was estimated in percentages (in shares) of the entire production cost, including the expenditures for materials. Thus, material expenditures, which were excluded from the price, continued to have a indirect effect on the amounts of net production norms through profit.

In order to completely free the indicator of normative net production from the influence of differing material-intensiveness of manufactured articles, net production norms began to be determined as an amount of wages and "averaged" profit. In so doing, the wages were taken in the amounts which were taken into account in a plant's planning calculation, and the profit was estimated all over again according to a definite norm per ruble of wages.

The net production norms, which were calculated according to this method, and the indicators of normative net production estimated on their basis are indeed completely free from the influence of material-intensiveness, but this already is another indicator.

Summing up the wages, which are provided for in planning calculations, with the "averaged" profit, which is a function of the same wages, in determining net production norms, in our opinion, only "obscures" the matter. In essence this is not a new "normative net production" indicator, but an old indicator of production volume in "normative wages," which is widely used in intraplant planning at enterprises of many sectors of industry.

The "averaged" normative profit is directly proportionate to the wages. Thus, if the wages calculated for a manufactured article equal R20 and for every ruble of them there must be 80 kopecks in profits according to plan, then the averaged profit for this article will equal R16. But the overall amount of the norm will be R36 (20+16). If the wages as calculated equal R10, then the profit will be R8, the norm will be R18 (10+8) and so forth. If this kind of "profit" is completely excluded from calculations, it will have no effect on the dynamics of the indicator of normative net production and its derivatives.

Therefore, for all practical purposes we are not dealing with production in cost terms (it is calculated in wholesale prices) and not with net production (it is determined simply as the difference between the wholesale price and the amount of material expenditures plus amortization), but with normative wage-intensiveness, or more correctly with normative labor-intensiveness. This indicator is used in two varieties in intraplant planning: in norm-hours and normative wages. They are essentially identical and are easily converted from one to another. Many enterprises prefer to regard normative labor-intensiveness in the form of normative wages, since this reduces the operation of converting norm-hours into norm-wages.

The merits and shortcomings of the production volume indicator in normative labor-intensiveness or in normative wages are widely known. It makes it possible on the basis of direct miscalculation of production to determine the actual volume of production, the wages fund and the number of basic workers of a shop or a sector according to plan, and then also actually. In this case the volume of production and the wage fund, which are directly related to production at the beginning of a year, can coincide.

Subsequently, a shop is set a task, which is distributed by quarters and months, for increasing labor productivity and revising output and service norms. This leads to the fact that the increase in the production volume, which is calculated in norm-hours or in normative wages, surpasses the increase of the wage fund. In this case, new, revised output and appraisal norms are used for calculating the wage fund and the norms adopted at the beginning of a year are used for determining the volume of production in norm-hours or in normative wages. New, more precise norms in norm-hours or norm-wages are introduced during conversion to new kinds of production as well as when drawing up a plan for a regular year. This in most general terms is the practice in using normative labor-intensiveness in intraplant planning.

The task now changes--the indicator of normative labor-intensiveness must be improved in such a way so that it could become a standard of increase of labor productivity and normative wage fund for an enterprise as a whole. These new functions are also demanded of it by new requirements. Let us attempt to formulate them precisely, especially since it is impossible to find a corresponding solution without this.

It is known that norms of labor-intensiveness (in norm-hours or norm-wages) must be revised in proportion to introduction of measures, which increase labor productivity. Only in this case it is possible to avoid the unnatural "decline" of production volume and correspondingly of labor productivity, which we have noted earlier in our example on the change of manufactured articles. But every revision leads to another equally negative consequence: the volume of production, calculated according to such constantly changing (declining) norms, will not reflect the contributions by a collective to the increase of production and labor productivity. The general pattern here is such--the norms become more reliable if they are revised more often, but they serve less as an instrument of stimulation as a result. And vice versa, the norms lose more contact with actual expenditure of labor when revisions are infrequent, but they reflect the actual increase of labor productivity more accurately as a result.

The solution of the problem, in our opinion, lies in the following: after revising a norm in connection with increase of labor productivity, the new norm as well as that part of it by which it was reduced should be taken into account in appraising the fulfilled volume of work. Thus, when the norms are revised the overall amount of a norm within the bounds of a plan year (or within the bounds of the year prior to change of manufactured articles) remains unchanged and completely meets the tasks of stimulation. But a norm now consists of two parts: basic and supplementary. Both of them must be taken into account separately. Here, in recalculation to the planned or actual output of production in kind and in calculation per one worker, the supplementary part will precisely reflect the increase of production and labor productivity in a planned period. When shifting to a new plan period, the volume of production, which is not calculated according to a full norm but only according to its basic part, is taken as a basis, and the entire procedure is repeated from the beginning. The rates of increase of production and labor productivity for a number of plan periods must be defined by the index method in this process.

This method of calculating the increase of production and labor productivity according to the normative production indicator in combination with the new order of planning the wage fund on the basis of the wage fund increment norms for every percent of increase of production makes it possible, in our opinion, to optimally solve the problem of ensuring correct correlation between the measure of labor and the measure of consumption, and also of developing the incentive of labor collectives in increasing labor productivity and in working with a smaller staff under conditions of the experiment.

The overall planned wage fund of enterprises participating in the experiment is put together from the wage fund of industrial-production personnel, the wage fund of nonindustrial personnel and supernumerary staff and the supplementary wage fund for workers of newly commissioned projects. In this case the planned wage fund of industrial-production personnel in associations (enterprises) is formed from the amounts of the wage fund of the basic year and the supplementary fund, which is credited according to the increment norm for every percent of increase of normative net production. The supplementary wage fund, which is calculated according to the increment norm for every percent of increase of production, is determined for a year with distribution by quarters to enterprises independently, in the same way as the general wage fund.

The new order of issuing funds for wages also corresponds to the normative formation of the wage fund, which is used in the experiment. The expenditure by enterprises of the wage fund is controlled quarterly by institutions of the USSR Gosbank, proceeding from the annual basic wage fund distributed to enterprises for a corresponding quarter, the confirmed wage fund increment norm for every percent of increase of the production volume and its actual increase compared with a corresponding quarter of the preceding year.

How does this order of issuing funds for wages differ from the one in force in other sectors, what are its characteristic features?

Under the generally accepted order of planning the wage fund and corresponding methods of bank control over its expenditure, the planned wage fund also includes that part which is allotted to pay for the increase of production provided for in the plan. The funds to pay for labor are issued by institutions of the USSR Gosbank to the extent of fulfillment of a quarterly plan. This will create conditions making it possible for enterprises during quarterly distribution of a production plan and the planned wage fund to receive an increase of the wage fund in the absence of an increase in production or during violation of planned proportions between increases in production and the wage fund. The most prevalent situation which leads to such a result is the shifting of planned increases in production to the end of a year with subsequent reduction of the annual production plan in December. In this case the planned wage fund is used fully, including funds provided to pay for an increase in production, which the state receives less than it should.

The situation changes under the conditions of the experiment. First of all, control over the expenditure of the wage fund is implemented separately according to the basic fund and its increase. This approach makes it possible to simplify and at the same time to strengthen bank control. It makes it possible to simplify because the distribution of the basic wage fund by quarters is now being determined by enterprises themselves. Such expansion of their rights became possible because the basic fund represents only a part of the wage fund and does not contain funds due for increase of production in a planned year.

Second, the wages that are designated for increase of production are issued according to norm only for actual increase of production compared with a corresponding quarter of the past year. An enterprise receives a supplementary wage fund according to norm if there is an increase, and does not receive it if there is none. All sort of manipulations connected with shifting of planned increases to the end of a year now have no significance at all, since the degree of plan fulfillment for the volume of production does not have a direct effect on the issuance of funds for payment for labor. The money is paid not for a percent of plan fulfillment, but for production and its actual growth compared with a corresponding period of the past year.

The degree of plan fulfillment will influence the amount of the wage fund issued by institutions of the USSR Gosbank to enterprises, which participate in the experiment, only through the indicator of labor productivity increase.

In examining features of the new method in normative formation of the wage fund we stressed that its basic wage fund is preserved under the condition if the average annual rate of increase of labor productivity at an enterprise for 5 years, including the planned year, surpasses or equals the actual average annual rate of increase of labor productivity for the 5 years preceding the planned year.

When the aforementioned condition is not adhered to, the wage fund of a basic year is reduced for every percent of decline in the average annual rate of increase of labor productivity for 5 years, including the planned year, compared to the average annual rate of increase of labor productivity for 5 years preceding the planned year in the amount equal to the value of the confirmed wage fund increment norm.

The same order of reducing the basic wage fund is also used during actual issuance of funds for wages to enterprises when they fail to fulfill the task for increasing labor productivity confirmed for them in a plan. However, this is done only in the case if the average annual rate of increase of labor productivity for 5 years, including the planned year, is equal in a plan or lower than the actual average annual rate for 5 years preceding the planned year. The basic wage fund is not reduced if an enterprise is fulfilling the actual tasks of a five-year plan for increasing labor productivity, which is calculated in the running total since the beginning of a five-year plan.

An important role in establishing close dependence of the general wage fund of enterprises on the final results of production and increase of its efficiency will be played by the improvement in the order of formation of the material incentive fund. Its amount now depends on fulfillment of tasks for supplying production in accordance with concluded agreements, as well as (taking specifics of sectors into account) on indicators of production efficiency: lowering production costs (increasing profits), raising technical level (quality) of production, the growth of labor productivity and the use of production capital. The innovation in the formation of this fund is in that its amount is planned by enterprises and associations independently proceeding from the amounts of the fund, which was formed in a basic year, and additional deductions according to norms for every percent of change in fund forming indicators compared to a basic year.

The rights of enterprises and associations in the use of the wage fund are being expanded. In coordination with a trade union organization, their supervisors, by economizing the wage fund calculated according to confirmed indicators and norms, can establish

increased supplementary payments to wage rates of highly skilled workers, who are engaged in especially responsible work, and for professional skill (to workers of category four to 16 percent, of category five to 20 percent and of category six to 24 percent of the wage rate) and allowances for highly skilled engineering and technical personnel and employees in the amount of 50 percent of their salary. The amounts of these allowances and supplementary payments must be determined with consideration of personal contribution by every worker to increasing the output of production and raising its quality, reducing labor-intensiveness and material-intensiveness and fulfilling other indicators. The aforementioned allowances and supplementary payments will be reduced or abolished completely during deterioration of work indicators;

supplementary payments for holding two jobs (positions) to workers, who belong to various categories of personnel (engineering and technical personnel [ITR], employees, workers and so forth), without approval of the list of professions being combined by higher organs; and

wages for highly skilled workers, who are engaged in especially important and responsible work, in the amount of up to R230 a month (but not higher than salaries of foremen taking 50 percent of the allowance into account).

A ministry is also given the right to establish allowances to salaries of directors of production associations (enterprises) by economizing the wage fund.

Thus, the aim of labor collectives at the steady growth of labor productivity--the main factor in raising production efficiency--is ensured in the experiments with the help of using economic norms, which establish control on the part of the state over the overall amount of the wage fund and expansion of the rights and possibilities of enterprises in using the savings of the wage fund, which were obtained within the bounds of confirmed norms, for rewarding skilled employees and workers who have achieved high results in their work. These measures are called upon to play an important role in the broad dissemination of the Shchekin experience and in the greater incentive of labor collectives in increasing the output of production with smaller staffs.

The work according to the new way has just began. The possibilities of the new economic mechanism can be realized to full extent only if its principles are conveyed to every shop, sector and production facility and if the development of the creative initiative of labor collectives is ensured.

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LABOR

WORK BENEFITS, COMPENSATION UNDER HAZARDOUS WORKING CONDITIONS

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[Article by V. Lazarev, lawyer: "Benefits and Compensation for Work in Industries with Hazardous and Difficult Working Conditions"]

[Text] Soviet labor legislation provides for the granting of benefits and compensation to workers and employees in connection with deviations from normal working conditions of one sort or another. They include: Additional vacation; a shortened work day; the issue of special work clothing, special footwear and other means of individual protection; the issue of milk; the issue of treatment and preventive food and vitamin preparations; the establishment of increased wage rates (salaries); the lowering of the pension age; additional breaks; the issue of soap; transfer to other work upon the first signs preceding professional disease; the appointment to visit a clinic; the provision of travel authorizations for sanatoria and health resorts; the dispensary system, and several others.

In the present consultation, only the basic normative acts are examined which provide for the granting of these benefits and compensations to workers and employees.

Additional Vacation in Connection With Hazardous Working Conditions

Additional vacation in connection with hazardous working conditions is granted to workers and employees in accordance with the List of Industries, Shops, Professions, and Posts With Hazardous Working Conditions, work in which gives the right to additional vacation and a shortened work day, approved by the decree of the State Committee of the USSR Council of Ministers for Questions of Labor and Wages and of the Presidium of the AUCCTU by agreement with the USSR Ministry of Health of 25 October 1974 No 298/P-22.¹ The procedure for the application of the List is regulated by the instruction confirmed by the decree of the State Committee of the USSR Council of Ministers for Questions of Labor and Wages and the Presidium of the AUCCTU of 21 November 1975 No 273/P-20.²

In accordance with the instruction, the additional vacation leave is granted only to those workers and employees whose professions and Posts are envisaged in the corresponding industries and shops. In other words, workers, engineer-

ing and technical personnel and employees of identical professions or posts, working in different enterprises and in different industries of the national economy, may enjoy additional vacation in connection with hazardous working conditions only when in the enterprises in which they work there are exactly those industries and shops that are provided for in the appropriate divisions and subdivisions of the List.

There are exceptions to this rule. In those cases where in the List divisions and subdivisions are indicated which provide for individual types of work (for example, forging press, painting and welding) additional vacation is granted regardless of the industry or shop in which these work operations are performed. Thus, a painter, who constantly works with nitrocellulose enamel--with a brush and the dipping method, may receive this vacation in tool making, in transportation, and in construction.

Regardless of the types of production and the branches of the national economy, additional vacation in connection with hazardous working conditions is also granted to workers of professions and posts of one sort or another, which are enumerated in the division "General Professions of All Sectors of the National Economy" if these professions and posts are not specifically provided for in the appropriate divisions or subdivisions of the List. The replacement of additional vacation with monetary compensation is not allowed. The payment of this compensation is possible only if the worker is discharged.

A complete additional vacation is granted if the worker during the working year has actually worked for no less than 11 months under hazardous conditions. In so doing, only those days are counted towards the time giving the right to vacation when the worker actually was occupied for no less than half of the established work day in industries, shops, professions and posts with hazardous working conditions, but in some cases--for the full work day. If, during his work year, he worked for less than 11 months, then the additional vacation must be granted in proportion to the time worked. However, in establishing the sequence of vacations, the granting of the entire additional vacation to the worker may be provided for prior to the beginning of his right to this vacation if the annual (basic) vacation is also granted to him in advance.

Besides the actual employment in these conditions, the following are also included in the length of service giving the right to receive additional vacation in connection with hazardous working conditions: The period of temporary disability; the time of pregnancy and family leave; the time of the execution of light work by women in connection with pregnancy, as well as other work to which they were transferred in connection with the breastfeeding of a child or the presence of children under the age of 1; and the time of the execution of state and public obligations.

To workers of outside organizations (construction, construction and installation, repair and construction, start-up and adjustment work and others) and workers of auxiliary and subsidiary shops of an enterprise (mechanical, repair, power engineering, control and measurement instruments, and automation, and others), this leave must also be granted for the time of their work in industries, shops, and sectors with hazardous working conditions, where both for

the basic workers and for repair and service personnel of these industries, shops and sectors additional vacation is established according to the List for hazards.

If the right of a worker to additional vacation in connection with hazardous working conditions arises on a number of grounds, the vacation is granted according to one of these grounds.

Shortening of the Work Day in Connection With Hazardous Working Conditions

A shortened work day (6, 5 or 4 hours) in connection with hazardous working conditions is granted in accordance with the same List of Industries, Plants, Professions and Posts [. . .] and the same instruction as well as procedure for granting additional vacation. In the establishment of a shortened work day, it is also necessary to be strictly guided by the industry criteria, i. e., it is impossible to take from the appropriate sections or subsections of the List one or another profession or post and establish a shortened work day for the workers of this profession or post in isolation from the industry and shop where the given profession or post is provided for.

The shortened work day is established only for days when the workers are occupied in hazardous working conditions for no less than half of the work day established for the workers of the given industry, shop, profession or post. In some cases (if registered in the List "constantly occupied" or "constantly working"), a shortened work day is established for those days when the workers were actually occupied in hazardous working conditions during the entire shortened work day.

For days of work in operating industries, shops and sectors with hazardous working conditions, where a shortened work day is established both for basic workers and for repair and service personnel, a work day of the same duration is established also for workers of outside organizations and the auxiliary and subsidiary shops of an enterprise.

Changes and additions to the above-mentioned List may be introduced by the ministers and directors of departments of the USSR and the Councils of Ministers of the union republics with the consent of the USSR State Committee for Labor and Social Problems, the AUCCTU, and the USSR Minister of Health.

The following must be added to a proposal for agreement on changes and additions to the List:

--The finding of the rayon (city) medical-epidemiological station concerning the actual state of working conditions in industries, shops and sectors where the workers are working on whose behalf the application is being made;

--the organizational and technical measures, developed with the involvement of the appropriate scientific research institutes, for the elimination of the production hazards in the given sectors, with indication of the deadlines for the completion of this work;

--data on the number of workers, with respect to whom the question is raised concerning the granting of additional vacation or a shortened work day, and on the additional expenses for these purposes.

In those cases where the work hazard in production is reduced or eliminated, the ministries, directors of USSR departments, and the Councils of Ministers of the union republics, with the consent of the USSR State Committee for Labor and Social Problems, the AUCCTU, and the USSR Ministry of Health, are obligated to reduce the length of additional leave or not to grant it at all, as well as to establish a work day of normal length in the indicated cases.

In the case of the introduction of new enterprises, industries, and shops, the ministries and departments of the USSR and the Councils of Ministers of the union republics review the question of the necessity of granting the workers and employees of these enterprises, industries and shops additional vacation and a shortened work day, regardless of whether additional vacation and a shortened word day have been established for operating enterprises producing an analogous output. They report their decision, together with the organizational and technical, medical and economic (data on the number of workers, to whom the benefits will be granted, and on the additional expenditures for these purposes) justifications, to the USSR State Committee for Labor and Social Problems and the AUCCTU.

The Issue of Special Work Clothes, Special Footwear, and Other Means of Individual Protection

In accordance with Article 63 of the Fundamentals of Legislation of the USSR and the Union Republics on Labor, for work with hazardous working conditions as well as work performed in special temperature conditions or connected with soiling, workers and employees are issued special work clothes free of charge in accordance with the established norms, special footwear, and other means of individual protection.

In 1959 the State Committee of the USSR Council of Ministers for Questions of Labor and Wages, jointly with the AUCCTC and with the participation of the USSR Gosplan, developed and approved model industry norms for issuing special work clothes, special footwear, and safety devices free of charge to workers and employees. During 1979-1981, these norms were defined more precisely by the USSR State Committee for Labor and Social Problems, jointly with the AUCCTU and with the consent of the USSR Gosplan and the USSR State Committee for Material and Technical Supply, taking into account contemporary recommendations for the designation of special work clothes, special footwear, and other means of individual protection for relevant professions, their protection qualities, and the terms of wearing. The more accurately defined norms were approved by sectors of industry by decrees of the USSR State Committee for Labor and Social Problems and the AUCCTU.

At the present time, the supply of workers and employees with special work clothes and special footwear is regulated by the Instruction for the Procedure of Providing Workers and Employees With Special Work Clothes, Special Footwear, and Other Means of Individual Protection, confirmed by the decree of the USSR

State Committee for Labor and Social Problems and the Presidium of the AUCCTU of 24 May 1983, No 100/P-9³. The new Instruction, in contrast to the one in effect earlier (we have in mind the Instruction on the Procedure for the Issuing, Preservation and Utilization of Special Work Clothes, Special Footwear, and Safety Devices, approved by the State Committee of the USSR Council of Ministers for Questions of Labor and Wages and the Presidium of the AUCCTU in 1960) regulates in more detail the questions connected with the procedure for supplying workers and employees with special work clothes, special footwear, and other means of individual protection.

Special work clothes, special footwear and other means of individual protection are issued to workers and employees of only those professions and posts which are provided for in the corresponding industries, shops, sectors and types of work by the model industry norms, approved by the decree of the USSR State Committee for Labor and Social Problems and the AUCCTU or by the industry norms introduced on the basis of the model norms by the Councils of Ministers of the union republic, and the ministries and departments of the USSR.

Changes and additions in the established norms for issuing special work clothes, special footwear and other means of individual protection to workers and employees, taking into account local production and climatic conditions, can be introduced by the Councils of Ministers of the union republics, the ministries and departments of the USSR with the consent of the USSR State Committee for Labor and Social Problems and the AUCCTU.

The following must be added to proposals for agreeing to changes and additions to be introduced in the indicated norms:

--Justifications of the necessity of introducing, in the norms, changes and additions of one sort or another, which have been developed with the involvement of the corresponding scientific research institutions;

--data on the number of workers, with respect to whom the question of the introduction of changes and additions in the norms is being raised, as well as on the material funds and monetary means necessary for these purposes.

The substitution of some types of special work clothes and special footwear for others, as a rule, is not allowed. Only in some cases, the managers of enterprises, institutions and organizations, in conformity with the special characteristics of an industry, can, with the consent of the trade union committee and the technical inspector of work, replace: Cotton overalls with a cotton suit or coat (khalat) and vice versa, a cotton suit with cotton semi-overalls with shirt (blouse) or a sarafan with blouse and vice versa; a tarpaulin suit with a cotton suit with fire-resistant or water-repellant impregnation, a cloth suit with a cotton suit with fire-resistant or acid-resistant impregnation, boots (semi-boots) made of leather with rubber boots and vice versa; valenki [felt boots] with tarpaulin boots.

During the time of work, workers and employees are obligated to make use of the special work clothes, special footwear, and other means of individual protection issued to them.

Special work clothes, special footwear and other means of individual protection that are issued to workers and employees are considered to be the property of the enterprise, institution, and organization, and are subject to obligatory return: Upon discharge, upon transfer to other work for which the issued special work clothes, special footwear and other means of individual protection are not envisaged by the norms, as well as upon completion of the term of wearing in exchange for new special work clothes being received. The issue, instead of special work clothes and special footwear, of materials for making them or cash sums for their acquisition is not allowed. In exceptional cases, if the special work clothes and special footwear established by the norms were not issued in time and the workers were forced to obtain them on their own, the administration is obligated to reimburse the expenditures in accordance with the state retail prices and credit these special work clothes and special footwear as inventory of the enterprise.

Calendar terms for the wearing of special work clothes and special footwear and other means of individual protection are established and are calculated from the day of their actual issue to workers and employees. In so doing, warm special work clothes and special footwear are issued to workers and employees at the beginning of the cold time of the year and at the beginning of the warm season must be turned over to the enterprise for the organized preservation until the following season. The time of the use of warm special work clothes and special footwear is established by the administration jointly with the trade union committee, taking into account the local production and climate conditions.

The enterprise is obligated to replace or repair special work clothes and special footwear which become unfit prior to the expiration of the established term of wear for reasons beyond the control of the worker or employee. Such replacement is implemented on the basis of a document composed by the administration with the participation of a representative of the trade union committee.

Special work clothes and special footwear returned by workers and employees upon the expiration of the term of wear, but still fit for use, must be repaired and used as designated, and those unfit for wear--must be written off and utilized for the repair of special work clothes and special footwear that is being used, as well as for production needs or returned for reprocessing as secondary raw material.

Special work clothes and special footwear which have been in use can be issued to other workers and employees only after washing, dry-cleaning, disinfection and repair. The terms of wear of these special work clothes and special footwear are established by a commission of representatives of the administration and the trade union committee.

To carry special work clothes and special footwear outside the confines of the enterprise is prohibited. To store it, the administration of the enterprise must make available to workers and employees, in accordance with the requirements of sanitation norms, specially-equipped facilities (wardrobe facilities). In isolated cases, where in terms of the conditions of work the indicated

procedure for storing special work clothes and special footwear cannot be observed (for example, in logging operations, in geological survey work), they can remain with the workers and employees during non-working time, which must be specified in the industry rules of internal labor regulations or in collective agreements. In these cases, the responsibility for the safekeeping of the special work clothes and special footwear rests with the workers and employees themselves.

The instruction also regulates other questions, in particular, about the issue of on duty special work clothes and special footwear, about the supply of special work clothes and special footwear to apprentices of course, groups or individual forms of training, students of secondary vocational-technical schools, vocational-technical and technical schools, general education schools, secondary specialized educational institutions, students of institutions of higher education, as well as instructors of progressive work methods and workers and employees performing work of one sort or another on a temporary basis.

The Establishment of Increased Wage Rates

In a number of sectors of industry, for workers engaged in hot and hard work and in work with hazards, as well as with especially hard and especially hazardous conditions, increased wage rates are established. Model lists of the occupations of these workers and of these work operations are approved by the State Committee for Labor and Social Problems and by the AUCCTU.

Thus, the Model List of the Occupations of Workers and Work Operations Paid According to Wage Rates Established for Workers Engaged in Work With Hard and Hazardous Conditions and in Work With Especially Hard and Especially Hazardous Conditions in enterprises of the machine-building and metal-working industries was approved by the decree of the State Committee for Labor and Social Problems and the AUCCTU of 14 December 1972.⁴

In this decree, as well as in analogous decrees on the establishment of model lists of the occupations of workers and work operations for other sectors of industry, it is emphasized, first of all, that when measures are executed to improve the working conditions the administration is obligated to transfer workers to the wage rates (salaries) corresponding to the new improved conditions of work, with the consent of the trade union committee. Secondly, when new enterprises (industries, shops, sectors) are introduced into operation, the ministries and departments of the USSR and the Councils of Ministers of the union republics must, jointly with the trade union organ, examine the question of the expediency of distributing the model lists of the occupations of the workers and the work operations paid at increased wage rates depending on the working conditions, to the workers of these enterprises (industries, shops, sectors), regardless of the fact that in operating enterprises, which produce an analogous output, the workers of these occupations are given increased wages in accordance with the indicated lists. The ministries and departments of the USSR and the Councils of Ministers of the union republics report, together with the necessary justifications, to the State Committee for Labor and Social Problems and to the AUCCTU about the decision taken in every

individual case concerning wages at increased wage rates.

In accordance with the decree of the USSR Council of Ministers of 10 July 1967⁵, the right to supplement the model lists, to introduce new occupations and work operations (analogous to those contained in them) is granted to the ministers of the USSR, with the consent of the corresponding trade union Central Committee and the Councils of Ministers of the union republics, with the consent of the republic councils of the trade unions.

In the enterprises, in accordance with the model lists and taking into account the special features of the working conditions, plant lists of the occupations and work operations paid according to increase wage rates are developed, which are approved by the administration with the consent of the trade union committee. The occupations of workers and types of work not present in the model list cannot be included in them. The wages of workers whose wages are based on a time rate in accordance with the corresponding increased wage rate must be given only for the time actually engaged in work with hard and hazardous, and also with especially hard and especially hazardous working conditions.

Here it is opportune to recall that the procedure for the payment of the work of engineering and technical personnel and other employees performing work in inauspicious conditions has some special characteristics. Model lists of the posts of engineering and technical personnel providing for increased salaries when work is performed in hazardous conditions, as a rule, do not exist. The lists are composed directly in the enterprises, taking into account the special features of production and the conditions and character of the work. Increased salaries for this category of workers are established only in those cases where, by the kind of their activity, they are constantly or more than half of the work time in industries, shops and sectors, where the work of the workers is paid at increased wage rates in connection with hazardous or especially hazardous working conditions.

The Issue of Milk

The regulations for the free issue of milk or other food products of equal value to workers and employees employed in industries, shops, sectors and other subdivisions with hazardous working conditions were approved by the decree of the State Committee for Labor and Social Problems and the Presidium of the AUCCTU of 13 November 1969, No 446/P-21⁶. In accordance with § 1 of these rules, the lists of work operations and occupations giving the right to this are determined by the directors of enterprises, institutions and organizations by agreement with the trade union committee in accordance with the Medical Affidavits for the issue of milk or other food products of equal value developed by the USSR Ministry of Health.

In the Medical Affidavits, in particular, it is envisaged that milk is a preventive nourishment product, which increases the resistance of the organism to unfavorable factors of the production environment, thanks to the normalizing influence on a number of exchange processes and functions of the organism. The issue of milk is indicated for persons who are working in conditions of constant contact with physical production factors (radioactive substances in

open form) and with toxic materials in their production, reprocessing and application, which cause the disturbance of the functions of the liver, albumen and mineral exchange, and the sharp irritation of the mucous membranes of the upper respiratory passages. In the Medical Affidavits it is indicated that, for work connected with the influence of lead, it is not recommended to issue milk since it contains easily assimilated calcium, the increased introduction into the organism proves to have a negative effect on the course of lead poisoning. For this reason, during work with lead and its combinations, 8-10 grams of pectin in the form of marmelade or pectin concentrate with tea must be given instead of 0.5 liter of milk.

By a letter of the Chief State Sanitation Officer of the USSR of 29 May 1979, the following changes were introduced in the above-mentioned Medical Affidavits for the free issue of milk or other food products of equal value.

In work connected with the influence of nonorganic combinations of lead, the issue of sour cream products in exchange of 0.5 liter [milk] and pectin in the amount of 2 grams (instead of 8-10) in the form of canned vegetable food products, fruit juices, and drinks enriched with it. Pectin-enriched juices and drinks can be replaced with natural fruit juices with pulp in the amount of 300 grams. The necessary mass of food products, fruit juices and drinks enriched with pectin is calculated, proceeding from the actual pectin content indicated by the manufacturer.

The taking of the pectin-enriched food products, fruit juices and drinks, as well as natural fruit juices with pulp, must be organized prior to the beginning of work, and of sour cream products--during the work day.

The rules for the free issue of milk and other food products of equal value provide that milk must be issued to workers and employees during the days of the actual performance of work by them in industries, shops, sections and other subdivisions with hazardous working conditions and on condition that, according to the job authorization or the production schedule, they will be engaged in this work for no less than half of the work day (shift).

For a work shift (regardless of its length) 9.5 liter of milk is issued; the weekly norm of milk issue, calculated for 6 work days, is kept for workers and employees of enterprises who have made the transition to the five-day work week with 2 days-off.

The regulations prohibit: The issue of milk for one or several shifts in advance and for past shifts; the issue of money instead of milk; the delivery of milk to take home; the issue of milk to workers and employees on the days of their absence in enterprises, institutions and organizations, regardless of the reasons, as well as on days of work in other sectors, where the issue of milk is not established; the issue of milk to those categories of workers and employees who are receiving treatment and preventive food in connection with especially hazardous working conditions.

Issue of Treatment and Preventive Food and Vitamin Preparations

Treatment and preventive food is issued to workers and employees in accordance with a special list of industries, occupations and posts, approved by the decree of the State Committee for Labor and Social Problems and the AUCCTU of 7 January 1977, No4/P-1, and in accordance with the Regulations of the Free Issue of Treatment and Preventive Food, established by this same decree.⁷

In accordance with the Regulations, the Councils of Ministers of the union republics, the ministries and departments of the USSR, by agreement with the USSR State Committee for Labor and Social Problems, the AUCCTU, and the USSR Ministry of Health, can introduce changes and additions in the established list, which gives the right to receive treatment and preventive food. Moreover, such changes and additions can take place only in connection with changes in technology, production and working conditions. In the case of the elimination of the occupational hazard, the issue of treatment and preventive food must be discontinued.

The following are added to applications for an agreement on changes and additions to the list:

--The finding of a rayon (city) sanitation and epidemiological station concerning the actual state of working conditions in industries, shops and sectors where the workers and employees are working, on whose behalf the application is being made;

--the organizational-technical measures for the elimination of production hazards in the given sectors developed with the involvement of the relevant scientific research institutes, with an indication of the deadlines for the completion of this work;

data on the number of workers and employees, with respect to whom the question concerning the issue of treatment and preventive food is being raised, and on the additional expenditures for these purposes.

Applications for the discontinuation of the issue of treatment and preventive food are accompanied by the finding of the rayon (city) sanitation and epidemiological station concerning the elimination of the occupational hazard in the corresponding industries, shops and sectors, as well as by data on the number of workers and employees for whom the issue of food must be discontinued, with an indication of the money saved for these purposes.

In the Regulations it is also emphasized that in the case of the introduction of new enterprises, industries and shops, the Councils of Ministers of the union republics, the ministries and departments of the USSR are obligated to review the question of the necessity of the issue of treatment and preventive food to the workers and employees of these enterprises, industries and shops, regardless of the fact that in operating enterprises turning out analogous products such food is issued. The decision taken in each individual case, together with the necessary organizational-technical, medical and economic justifications, is reported to the USSR State Committee for Labor and Social Problems and to the AUCCTU.

Treatment and preventive food is issued to workers on days when they actually perform work in industries, occupations and posts provided for in the list, as well as on days of illness with temporary loss their ability to work, if the illness in terms of its character is occupational and the person who has become ill is not hospitalized.

Such food is also issued:

--To workers of other industries, shops of the enterprise and workers employed in construction, construction-installation, repair and construction, and start-up and adjustment work, working a full work day in operating industries, shops (sectors) with especially hazardous working conditions, in which this food is established both for the basic workers and for repair personnel;

--to workers who do cleaning work and prepare equipment for repair or temporary shut-down in the shop (sector), for the workers of which the issue of treatment and preventive food is envisaged; to invalids as the result of occupational illness, who had received treatment and preventive food directly prior to the beginning of disability for a reason caused by the character of their work --until the discontinuation of their disability, but not over 6 months from the day of the establishment of disability;

--to workers and employees who have the right to free receipt of treatment and preventive food and who have temporarily transferred to other work in connection with the initial symptoms of occupational disease for a reason called forth by the character of their work--for a term of not more than 6 months;

--to women employed up to the moment of the beginning of their pregnancy and family leave in industries, occupations and posts that give the right to the free receipt of treatment and preventive food--for the entire period of the pregnancy and family leave. If pregnant women, in accordance with a medical finding, are transferred to other work for the purpose of the elimination of contact with products harmful to their health prior to the beginning of the indicated leave, treatment and preventive food is given to them for the entire period before and during the pregnancy and family leave. In case of the transfer of mothers who are breast-feeding and women who have children under the age of 1 to other work for the indicated reasons, treatment and preventive food is issued to them for the entire period of feeding or until the child reaches the age of 1.

Treatment and preventive food is not issued on non-working days, on days of leave, job-related travel, study with leave from production, the performance of work in other sectors, where such food is not established, the execution of state and public duties, during a period of temporary disability in the case of general illnesses, on days of stays in a hospital or sanatorium for treatment, as well as during the period of staying in the dispensary.

The issue of treatment and preventive food to workers is effected in the form of warm breakfasts, as a rule, before the beginning of work in strict conformity with the rations and norms established for individual industries. Workers who receive breakfasts free of charge are not issued milk.

The issue of treatment and preventive food must be effected by means of special coupons (subscriptions) of established form.

The expenditures connected with the free issue of treatment and preventive food to workers and employees are effected within the limits of the planned prime cost of commodity production and the prime cost of construction and installation work, and for budget organizations--at the expense of budget allocations.

The improvement of the health and general condition, in particular the lowering of fatiguability and the increase of work capacity is also attained through the issue of vitamins to workers and employees. Vitamins, for example, are issued to workers employed in some industries of ferrous metallurgy (blast-furnace, steel-furnace, and ferroalloy), the food industry (bread-baking industry and some others). The issue of vitamin preparations is effected by enterprises of public catering in precise conformity with established norms and with the observance of the special instruction developed by the Institute for Food of the USSR Academy of Medical Sciences.

The responsibility for providing workers and employees with treatment and preventive food and for observing the rules for issuing this food is placed on the directors of the enterprises. The responsibility for the correctness of the preparation of the treatment and preventive food in accordance with the established rations and the composition of the menu is borne by the director of the enterprise of public catering.

Some Other Benefits and Compensations

For work entailing soiling soap is issued free of charge in accordance with established norms, and for work where the influence of harmfully-acting substances on the skin is possible--washing and neutralizing agents (Art 63 of the Fundamentals of Legislation of the USSR and the Union Republics on Labor). Soap is issued to workers and employees to take home in the amount of 400 grams a month. Regardless of this, there must be soap for washing hands in sufficient quantity in all enterprises in the wash-stands.

The lists of work and occupations which give the right to receive soap free of charge, washing and neutralizing agents in the established cases are determined by the administration by agreement with the trade union committee.

In conformity with Art 152 of the RSFSR Labor Code, the administration of the enterprise and organization is obligated to provide workers in hot shops with carbonated soda water free of charge. Shops and production sectors in which the supply of carbonated water is organized are established by the organs of sanitation inspection with the consent of the administration. In a number of the Labor Codes of other union republics, the provision of carbonated soda water is not only envisaged for workers, but also for employees of hot shops. The carbonation of the water must be effected with carbon dioxide. The preparation of the carbonated soda water and the supply of the workers with it must be realized on the basis of a special instruction of the AUCCTU.

In accordance with Article 153 of the RSFSR Labor Code, workers and employees who work in the open air during the cold season of the year and in closed unheated premises, loaders engaged in loading and unloading work, and other categories of workers, in cases provided for by legislation, are granted special breaks for getting warm and for rest, which are included in the work time. The administration of the enterprise or organization is obligated to equip facilities for the warming-up and resting of the workers.

Thus, Art 153 of the RSFSR Labor Code refers to effective normative acts that regulate questions of granting special breaks. At the same time, some Labor Codes of the union republics (AzSSR, LiSSR, TaSSR, and ArSSR) include norms which regulate in detail the procedure for granting breaks during the cold season of the year, the discontinuation of work during low temperature and strong wind and, in connection with this, transfer to other work and wages for it. In addition, the Labor Code of the TaSSR, in contrast to the Labor Codes of the other union republics, includes an article which provides for breaks or the discontinuation of work during the hot season of the year. Such breaks are not included in the work time and are not subject payment of wages.

One of the normative acts regulating questions of granting breaks is the Regulations of Work in the Open Air During the Cold Season of the Year. In these Regulations, in particular, special breaks are envisaged for work in the open air during the cold time of the year. The number of breaks and the organization of the places for warming-up are established for individual enterprises or groups, depending on local conditions, by agreement of the administration with the trade union committee. Breaks for warming-up are included in the work time. In all cases when breaks must be taken for warming-up, the administration is obligated to issue appropriate instructions about this. The self-willed establishment of breaks by the workers is not allowed.

At enterprises where loading and unloading work is performed, as well as work in regard to the transfer and movement of heavy weights, the loaders, in accordance with the rules established by the USSR People's Commissariat of Labor of 20 September 1931, in addition to the lunch break must be granted special breaks for rest, which are included in the calculation of work time ("zalogi" [literally: deposits]). The length and distribution of these breaks are established by internal labor regulations.

FOOTNOTES

1. "Spisok proizvodstv, tsekhov, professiy i dolzhnostey s vrednymi usloviyami truda, rabota v kotorykh dayet pravo na dopolnitel'nyy otpusk i sokrashchennyy rabochiy den'" [List of Industries, Shops, Occupations and Posts, Work in Which Gives the Right to Additional Vacation and a Shortened Work Day], Moscow, Ekonomika, 1977, pp 1-552.
2. Ibid., pp 541-550.
3. BYULLETEN' GOSKOMTRUDA SSSR, 1983, No 11.

4. BYULLETEN' GOSKOMTRUDA, 1973, No 5.
5. S[obraniye] P[ostanovleniy] SSSR, 1967, No 17, pp 117, 118.
6. BYULLETEN' GOSKOMTRUDA, 1970, No 2.
7. Ibid., 1979, Nos 7, 8.

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LABOR

IMPLEMENTATION OF COLLECTIVE CONTRACT SYSTEM DESCRIBED

Moscow TEKNIKA V SEL'SKOM KHOZYAYSTVE in Russian No 5, May 84 pp 3-5

[Article by V.N. Zhurikov, director of the Main Administration for Labor and Social Problems of the USSR Ministry of Agriculture: "Collective Contract-- An Important Means of Increasing the Efficiency of Agricultural Production"]

[Text] The workers of the agro-industrial complex [APK] face large and responsible tasks in putting into practice the decisions of the 26th CPSU Congress and in realizing the country's Food Program. It is necessary to guarantee persistent growth in agricultural production, improve its efficiency and increase significantly the output of all types of production.

It is planned to increase the average annual production of grain in the 12th Five-Year Plan to 250-255 million tons, that of potatoes to 90-92 million tons, vegetables and cucurbits to 37-39 million tons, and sugar beets to 102-103 million tons. Meat production is to be 20-20.5 million tons and milk production 104-105 million tons.

All necessary conditions have been created to solve the tasks established for rural areas. In the last three five-year plans, R383 billion have gone into developing agriculture, the power-worker ratio has more than tripled, the capital-labor ratio has quadrupled, deliveries of mineral fertilizers have tripled, and the area of irrigated and drained lands has almost doubled.

The material-technical base is developing at an accelerated rate. It is planned to increase fixed production capital of kolkhozes and sovkhoses by a factor of approximately 1.5 by 1990, and energy capacities by a factor of 1.6. There will be a significant increase in deliveries of tractors, combines and other machines to the rural areas, and their quality characteristics will be improved. This will essentially make it possible to complete full mechanization of farming and animal husbandry by that time. Chemicalization of agricultural production and land reclamation will be developed further.

Favorable economic conditions have not been created for increased efficiency of kolkhoz and sovkhos production. Purchase prices for the output of fields and farms have been increased, and surcharges have been established on these prices for unprofitable and low-profit farms. A number of measures have been taken to raise the economic interest of rural workers in the final

results of agricultural production: the salaries of sovkhos managers and specialists were raised by an average of 30 percent, additional payments to livestock raisers have been introduced for length of service, and changes have been made in the manner of applying the job contract plus bonus payment system, changes that significantly simplified and increased its efficiency. The wage and bonuses of workers of the Goskomsel 'khoztekhnika and Soyuzsel'-khozkhimiya system are now significantly more closely tied to the results of the activity of the kolkhozes and sovkhos operated by them.

The main thing now is to ensure a rational use of land and the existing production and economic potential of farms. What is now needed under the new conditions of management is a fundamentally new approach to organizing and paying for work. Such a model, scientifically based, has now been found and has been widely and thoroughly tested in practice in various zones of the country." It has been named the collective contract.

The economic sense of the collective form of organizing and paying for agricultural labor is in the fact that the production team or brigade of machine operators obligates itself to obtain a certain amount of production on a consolidated land area, and the management of the sovkhos (kolkhos) obligates itself to provide them with the necessary resources on time, to create the conditions for successful work, and also to pay for the production output at the previously stipulated rates.

The Central Committee of our party assigns great significance to the spread of the collective contract in rural areas as one of the most important conditions for raising the efficiency of kolkhos and sovkhos production. Questions concerning its assimilation were thoroughly examined at the All-Union Conference in the city of Belgorod and at the All-Union Economic Conference on APK Problems held in Moscow. They established the task of seeing to it that the practice of providing material and moral incentives, in combination with an exemplary organization of labor, support and develop in people an awareness of the usefulness and necessity of their efforts and the output, and that it, in the final analysis, confirm their feeling of belonging to the affairs and plans of their collective and the entire nation. And this feeling mobilizes and disciplines better than any appeals.

There are now brigades and production teams at many kolkhozes and sovkhos working under the method of the collective contract.

In 1983, there were more than 100,000 contract collectives in horticulture. They cultivated agricultural crops on an area of more than 43 million hectares, or 20 percent of the plowed area. Over 19 percent of all machine operators were working in these collectives. It is important that many managers and specialists have begun to have a better understanding of the principles of the collective contract and have a clear idea of all the work that needs to be done to assimilate it.

The collective contract has become widespread on the farms of Belgorod, Volgograd, Saratov, Orlov, Nikolayev, Zaporozh'ye, Cherkassy, Kherson, Tashkent, Surkhan-Dar'in and other oblasts.

Experience shows that subdivisions under the collective contract obtain higher agricultural crop yields and livestock productivity compared with other brigades and production teams under identical conditions. Production efficiency is significantly higher here.

In Belgorod Oblast, for example, brigades and production teams under the collective contract till more than 70 percent of the plowed area. Their yield of grain crops last year was 30 percent higher than that obtained by other subdivisions. The yield of sugar beets was 20 percent higher, that of sunflowers 23 percent, and that of corn was 22 percent greater. These brigades and production teams have higher indicators because favorable conditions are established there for organizing labor. Over a number of years, permanent collectives obtain control over land, equipment, livestock and other means of production. Through their own efforts, they carry out most of the work in cultivating agricultural crops and in caring for animals. Their wage is in accordance with the quantity and quality of the output produced, and the collective wage is distributed among the members in accordance with the personal contribution of each worker to the overall result. Up until the final accounting for production, the members of the brigades and production teams are paid their wages in the form of a time rate advance, or the wage accrues to the entire collective for work completed in accordance with a single job authorization and is distributed among the members in a manner established by the collective.

In this manner, the lack of personal responsibility in land utilization is eliminated, the members of the collective have a greater incentive to fulfill the established tasks, and there is an increase in labor and technological discipline, creativity and the feeling of responsibility on the part of everyone for the final results of work. In addition, there is a rise in special social-psychological attitudes peculiar only to such collectives as well as economic motivation and high demands.

This progressive form of organizing and paying for labor, however, has still not become as widespread as it should be in agriculture. It frequently happens that production subdivisions, without having worked a full year under the new conditions, return to individual piecework.

The introduction of the collective contract was delayed mainly for economic reasons. As a result of high planning indicators, which often exceeded what was actually attained, machine operators did not receive supplementary payments and bonuses for output and therefore they had no economic interest in the final results of production and sought to guarantee their salaries by doing more mechanized work in the course of the year. Farm managers did not have sufficient rights to differentiate the size of the advance to the members of the collective contracts, and the level of supplementary payments for output was inadequate.

The spread of the collective contract is also being delayed by the fact that at the farms people are often carried away by all sorts of excessive economic incentives that are paid out during the year for carrying out various current tasks with no consideration being given to the final operating results.

At such kolkhozes and sovkhozes, the result is that workers of subdivisions on a piece-rate wage have a higher salary than they do under the collective contract. In this connection, it is necessary to strengthen control of the rational use of funds for wages and of the observance of cost accounting principles.

At many farms, they are inexpertly combining temporary production formations created to carry out particular kinds of work (harvesting, sowing and other detachments) with permanent contract collectives. As a result, they often oppose one another.

Sovkhoz directors are now permitted to establish for contract collectives stable (for 5 years) rates for output, proceeding not from the annual plan but from its production norm. The production output norm for the collective is determined directly at the farm based upon the standard yield of agriculture crops, which is established with consideration given to the technology and conditions of production, and also proceeding from its level for the preceding 5 years. The rates for output are to be revised only with changes in the level of mechanization, production technology and other conditions. Previously they were revised annually.

The size of payments for output is increasing significantly. Whereas previously rates for output were determined proceeding from 125 percent of the planned standard wage fund, today this indicator may be increased to 150 percent depending upon the yield of agricultural crops. Permission has also been granted to combine funds foreseen by statutes now in effect, including supplementary wages for output and high-quality work, and also bonuses for the salaries of workers at progressively increasing rates for output.

This situation opens up fundamentally new possibilities for a substantial increase in the efficiency of the job contract plus bonus wage payment system. Whereas previously workers received supplementary wages during the year for high-quality completion of work in the established time, additional payments for output according to the annual results, and bonuses for over-fulfillment of production plans or for exceeding the attained level, now there is the possibility of paying out these funds to workers at a single progressively rising rate per quintal in accordance with the level of the yield. This strengthens the link between wages and final results, that is, the more output and the better the quality, the greater will be wages.

Incentive measures have also been established for specialists at the head of collectives on contract. They are granted the first or second class title with a wage supplement of up to 50 or 30 percent, respectively.

The role of organizational factors is very great in the assimilation of the collective contract. Greater demands are being placed on production planning.

Unfortunately, a number of mistakes are being made in forming contract collectives, in determining their size in terms of plowed area and number of workers, and in the formal approach to solving such organizational questions.

For example, at the "Novaya Zhizn'" Kolkhoz in Borisovskiy Rayon of Minsk Oblast, there is a tractor brigade, although no land is assigned to it and its members go to work by request of the brigade leaders of the agronomic brigades.

Contract production teams are often assigned individual crops. In these collectives, machine operators are occupied 20 to 30 percent of the work time. In such a situation, it is impossible to count on obtaining the proper effect from the use of contract principles.

One of the basic conditions for the successful work of collectives under contract is the observance of contract commitments. The administration of the farms should organize at a higher level the material-technical provision of production subdivisions, control of their work, and, if necessary, the necessary help. All organizational questions must be solved skillfully and on time.

At the same time, such collectives should be given broad rights in solving production questions. All of their members should take an active part in this. When they understand that they have been given not just formal rights to solve these questions related to the operations of the collective, people will fully demonstrate their capabilities, initiative and economic sagacity, they will fulfill their obligations creatively and conscientiously, and they will actively fight to implement the established tasks.

It is essential to prepare carefully for the assimilation of the collective contract, thoroughly study the work experience of leading brigades and production teams, and make use of the NOT [scientific organization of labor] centers and scientific institutions in this work. It is necessary to establish the most acceptable types of labor collectives, their size and composition, with consideration given to the specific conditions of the farm, and it is necessary to explain widely the nature of the collective form of organizing and paying for labor.

Social aspects are very important. This is above all the creation and maintenance of benevolent and business like relations in collectives and the development of a feeling in them that they are masters of the land.

The experience of the kolkhozes imeni Frunze in Belgorod Oblast, imeni Komintern in Ryazan' Oblast, "Mir" in Kalinin Oblast, and of the sovkhoses "Pravda" in Kuybyshev Oblast, "Shikhovalovskiy" in Vladimir Oblast, "Rassvet" in Krmsk Oblast and many others, where for a number of years now production subdivisions have been working successfully under the collective contract, is evidence that here there is strict observance of all of its fundamental principles and the wage system.

In introducing the collective form of organizing and paying for labor, an important role belongs to the farm managers. Unfortunately, there are still a lot of sovkhos directors and kolkhoz chairmen who do not really believe in this progressive method of organizing work and are not very familiar with its essence. It is therefore very important to organize the study of the work experience of leading collectives. More attention needs to be given to studying this problem in VUZ's and teckhnikums.

The role of managers in contract collectives is increasing immensely. These people should enjoy authority among their comrades, be very familiar with technology and agricultural production, and know how to organize the work and create a proper psychological

No less important for their successful work is the proper resolution of the question of advancing funds. Periodical advances are the most progressive. It is precisely under this system that all of the positive aspects of the work of the contract collective are revealed. Initially it appears complicated from the point of view of psychological acceptance by machine operators and other workers. Therefore, to introduce periodical advances it is essential to carry out much work in clarification.

The collective piece-rate wage for a single job authorization must be viewed as a transitional form to the better periodical form. It accrues to the entire collective for the amount of work performed. This wage is distributed among the machine operators and other workers in the manner established by the members of the collective themselves. Only under these conditions can the piece-rate wage be considered acceptable for contract brigades and production teams.

In each case, the question of the form of advances must be decided by the collective of the brigade or production team. It is very important to establish correctly the size of the advance to the members of the collective. It should correspond to their qualifications and contribution to the achievement of the final work results. There should be no set pattern in resolving this question. On those farms that adhere to these principles, there is no problem in assembling contract subdivisions and they work successfully.

In the production team of Ye. A. Yakovlev from "Mir" Kolkhoz in Torzhokskiy Rayon of Kalinin Oblast, each member of the production team is paid an equal advance per day worked. A monthly differentiated but also equal advance is applied in the production team of A.M. Samoylenko from "Rassvet" Sovkhoz in Krymsk Oblast. At the Kolkhoz imeni Komintern in Sarayevskiy Rayon of Ryazan' Oblast, the size of the advance is determined by the type of work performed by machine operators, and at the Kolkhoz imeni 1 May in Starobel'skiy Rayon of Voroshilovgrad Oblast, they consider the make of the attached tractor.

At some farms, the size of the advance is set according to a coefficient and points characterizing the work of machine operators. For example, at Kolkhoz imeni Kalinin in Lysogor'skiy Rayon of Saratov Oblast, they give advances to machines operators according to the categories bestowed upon them. A special commission was created at the farm for this purpose. Payment in the third category (less than 80 points) is at 4 rubles 60 kopecks, in the fourth category (80-95 points) it is at 5 rubles 18 kopecks, in the fifth category (96-110 points) it is at 5 rubles 82 kopecks, and in the sixth category (111-125 points) it is at 6 rubles 55 kopecks. In determining points, they consider the class situation of the machine operator, the length of service, technical knowledge, the attitude towards it and other conditions.

At individual farms, as was said, they are creating temporary formations. Their work should be organized so as not to eliminate responsibility for the results of the operations of permanent brigades and production teams. In Millerovskiy Rayon of Rostov Oblast, for example, the harvesting-transporting complexes are created on the basis of two permanent mechanized production teams working under contract. In this connection, they do not permit lack of responsibility for sowing. In this case, the permanent brigades, production teams and temporary formations complement one another, as each of these organizational forms has its own advantages. It is essential to combine them rationally, employing the positive aspects of both formations.

The collective form of organizing and paying for labor permits fuller use of its potential under the condition that cost accounting be introduced simultaneously. Its main task is to guarantee a maximum quantity of output with a minimum of expenditures. It also foresees the establishment of a direct correlation between remuneration of labor and its final results. In addition, cost accounting adds to the economic incentive and responsibility of the collective and requires a comparison of expenditures for the production of output and the results obtained. Under the conditions of the collective contract based on cost accounting, a stricter economic regime is ensured, an overexpenditure of funds and material resources is not permitted, and the work of the collective is evaluated more accurately.

At this time, conditions are favorable in rural areas for the broad assimilation of the progressive form of organizing and paying for labor. The task of farm managers and specialists is to take all measures to make it predominant in agricultural production.

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EDUCATION

NEW FRONTIERS OF SOVIET EDUCATION

Moscow NAUKA I ZHIZN' in Russian Vol 7, 1984 pp 12-16

[Article by Yu. Babanskiy, vice president of the USSR Academy of Pedagogical Sciences: "New Frontiers of Soviet Schools"]

[Text] Concern about schools is a concern about the future of our society. "For the Soviet society to move forward confidently," said Comrade K.U. Chernenko at the April (1984) CPSU Central Committee Plenum, "each new generation must rise to a higher level of education and overall culture, occupational skills and civil activity. That, it can be said, is the law of social progress."

The Soviet school must be a school of persistent study, a school of active labor, and a school for the formation of lasting communist convictions and the development of a new type of socialist personality. The complex program for improving education and the "Basic Directions in the Reform of the General and the Vocational School" approved at the April (1984) CPSU Central Committee Plenum are directed toward solving this universal task.

In the history of our schools after their revolutionary reorganization at the beginning of the 1920's, there had never been such an extensive and many-sided reform with such profound content. It corresponds to the interests of each Soviet individual and each Soviet family and literally covers all links in the school system from preschool institutions, schools and vocational and technical schools to VUZ's that train teachers. Total expenditures for its realization amount to about R11 billion.

There are no main and secondary problems in the educational system. Such is the nature of the schools' activities that it is not appropriate either to hyperbolize particular aspects of their work or to underestimate others. Likewise unsuitable are cliches and constant changes without continuity. It is no accident that A.S. Makarenko called pedagogy the most dialectical of all sciences.

In the documents for the basic directions in the reform of the school system, which the Soviet people discussed, we are given a model of this dialectical combination of all elements of the educational process. The documents stress that increased attention to work and vocational training must not diminish humanitarian education, and professionalism must not narrow the polytechnical training of students, since they will be working in production with rapidly changing technology and will be combining occupations.

What does the reform bring to our schools that is new, and what are its distinguishing features?

What is involved above all is a fundamental improvement in the entire field of education. The structure of the schools was changed. The general secondary school becomes an 11-year school. The introduction of 11-year education will raise the qualitative level of general education as well as of the communist training of the rising generation, it normalizes the teaching load and provides time for the development of more varied extracurricular and elective work. In other words, it involves the creation of even more favorable conditions for the formation of an all-round and harmoniously developed personality.

Six-year-olds will soon start first grade. Inquisitive pupils with a thirst for knowledge will sit behind their school desks. This is the age when abilities and habits in reading, writing and arithmetic are formed and the rate (speed) for the completion of school operations is established. The entire style of a school child's work in the future depends upon how it develops in the introductory grades.

The transition to education beginning at 6 years of age was preceded by a lengthy experiment covering more than 50,000 6-year-old children with the participation of psychologists, physiologists and physicians in dozens of regions of the country.

This problem evoked great interest in the course of national discussion. Opposing viewpoints were frequently expressed.

The commission on school reform listened to the opinion of the community of parents. The transition to the education of children beginning at age six will occur gradually and without haste in the course of 5 years, with consideration given to local circumstances, and in accordance with the creation of the necessary conditions for study, games, the children's rest and a full life in extended-day groups. All of the documents on the reform especially emphasized the necessity of creating good and attractive textbooks and of developing a new game methodology of teaching. Not all 6-year-olds will go to school and not right away. For many of them, the lessons will take place in kindergartens and (if necessary) teachers of the introductory grades will be brought in.

Along with medics, provision will be made for examination of 6-year-olds in dispensaries as well as for control of school workloads and observance of the requirements of school hygiene. In the first grade, lessons will last 35 minutes and recess time has been increased.

Psychologists rightly assert that the ability to focus on what is important is the fundamental characteristic of the human mind. Under the circumstances of the tremendous flow of information that has to be processed by students, it is important that the entire learning process in school, all teaching aids and textbooks, and the entire control of knowledge and abilities be imbued with the idea of focusing on what is important. A realistic way to do this is to improve the quality of the assimilation of the learning material by school children and to eliminate the overload of schoolwork.

The basic directions in the school reform set forth a harmonious system of measures to improve the quality of the educational process. A substantial improvement in the programs and textbooks is being proposed. As is known, the scientific level of teaching particular subjects has already been raised. That was essential at the time. But as experience shows, the contents of an entire series of school courses turned out to be overly complicated. The task is now to select the truly optimum volume of knowledge, freeing the textbooks from material of secondary importance and ensuring not only scientific quality but also comprehensibility of programs and textbooks.

It is planned to introduce computer technology into the schools, which will give the students more time for independent work. Beginning in the seventh grade, students will use minicalculators in their work. That is just the first step. In time, the students will begin to learn the fundamentals of computer technology and programming and to become familiar with the principles in the work of computers. There will be a laboratory for computer technology in each secondary school.

The question is already arising about classes with the intensified study of the technology of microprocessors and the basics of programming.

The methods of teaching students also need to be improved. Seminar classes and lectures will be carried out in the older classes more frequently and a system of elective courses will be developed.

The tasks of the time are not the dispassionate accumulation of knowledge but the development of student perception, independence of thought, will, culture of feelings, labor and conduct, and a striving for collective cooperation in studies and in all matters. The motto of the students should be: know, think, be able, and take action. Well, what should one do with students who are making poor progress? Without the timely help of teachers here, that same situation can arise that often served as a source of the so-called "percentage mania." It is necessary to put an end to all of this decisively and irrevocably. The teacher must give the student the grade that he deserves, but at the same time, he must take the necessary measures to help him eliminate gaps in his knowledge. All administrative pressure on the teacher will be ended categorically. School administrators, parents and all students must be aware of this. The school retains the right to hold back for another year those students in need of this for any of a number of reasons. And finally, if the student has unsatisfactory marks, he may, instead of a diploma, receive a certificate to the effect that he has followed a course of lectures in a secondary school.

A bottleneck in contemporary general education, which has been felt for many years now, is the lack of a suitable system for learning the personality of a school child. For without knowing the student, one cannot find the correct individual approach to him, establish solid and frank relations, or select the most rational methods of training and teaching. The help of scientists is also needed here.

With consideration having been given to many wishes, more specific measures have also been formulated that are directed toward increasing the responsibility of students. Marks are being introduced for diligence in learning and in socially useful labor, and new "Rules for Students" are being worked out.

At the USSR Academy of Pedagogical Sciences, research is being done on the creation of a fundamentally new complex program of communist education of school children. This program covers in a unified manner school and out-of-class activities, work in the extended-day groups, and also the creativity of children outside of school as well as measures at their place of residence.

Taking into account the demands that were expressed in the normative documents on school reform, the USSR Ministry of Higher and Secondary Specialized Education made some changes in the rules for admittance to the country's VUZ's.

They plan above all to improve the selection of young people for study at VUZ's that train teachers, instructors and masters of production training.

Secondary-school graduates entering the teaching institutes and the pedagogical departments of universities now have the right of priority enrollment if they are recommended by the pedagogical councils of the schools, the secondary vocational and technical schools, the secondary specialized educational institutions, and also the educational organs, labor collectives and Komsomol committees.

As a rule, graduates of secondary vocational and technical schools and tekhnikums, secondary-school graduates from among working and rural youth, and also military people who have been released to the reserves and who have a production specialty and have shown an inclination toward pedagogical work are admitted to the engineering-pedagogical branches that train teachers for the system of Gosprofobr [State Committee for Vocational and Technical Education]. And those who have finished secondary pedagogical institutions and who have worked in their specialty for at least 1 year will be accepted without leave from work at the VUZ's that correspond to their work specialization in accordance with the orientations of the organs of national and vocational-technical education and based upon the results of a conversation.

The average grade of the document on completion of a school or secondary PTU [Vocational and Technical School] will no longer be considered in enrollment at a VUZ. Competition will be based upon the grades received by secondary-school graduates on entrance examinations.

In addition to the existing privileges, the new rules foresee acceptance without competition for young people with practical work experience of at least 2 years as well as for military people released to the reserves and outstanding military and political trainees who have been recommended by military units for acceptance into VUZ's.

Leninist principles of a unified, working and polytechnical school were made the basis of the reform of the educational system. Reflect upon this formula: school unity does not mean a leveling out of the possibilities and abilities of students; polytechnical education cannot be separated from the tasks of training a generation for specific labor activity, and therefore in no case should there be a lessening of the quality of general knowledge in education. We need a harmoniously developed individual, an intellectually rich and morally high-minded personality able to solve the complicated tasks of the future society.

From playing at labor, which was often the case in the past, it is now necessary to make the transition to truly socially useful and systematic production labor. The number of hours in the curriculum devoted to labor training is being doubled. School children will become familiar with the basics of modern production and will actively try their skills in various types of labor so that they can later select an occupation that suits them.

New ways are being sought to combine education with productive labor.

Zaporozh'ye teachers are carrying out an interesting experiment. A center for scientific and technical creativity has been established in the city. In addition to the traditional circles, more than 20 laboratories in the most up-to-date orientations of science and technology (including biophysics, computer technology and industrial electronics) are working there. They are being sponsored by 35 city enterprises. Here the children solve specific scientific and production tasks.

Much is being written about the work of School No 2 in the city of Reutov, where in just a few years of study, students have the opportunity to try themselves in 20 or more types of labor activity. This is a possible way to choose a future occupation.

Production labor that is suitable for children should be the norm in school life. This can be work on orders of a modern enterprise in school workshops, training-production combines or even in a student shop at that same enterprise, etc. In Kalinin Oblast of Moscow, for example, special training-production workshops have been established. The "Chayka" school plant has already been at work for years. Summer repair brigades are being organized in a number of schools.

The increase in labor training must not be reduced simply to the physical labor of students. The intellectualization of all types of human activity requires a rational combination of physical and mental labor.

The introduction of vocational training of school children supplements universal secondary education with universal vocational training. There is a high social and humanistic meaning to this in that the state, at no cost, gives each graduate of the general school a real basis for initial vocational training and helps him to see clearly his place in the initial stage of his independent career. The young person will not be standing at the crossroads of several paths, each of which is unfamiliar to him. He can select any of them for himself while still in school.

The problem of distributing the graduates of the eighth (ninth) grades will, of course, be difficult. One cannot take the easy way out and simply put the good students in the ninth grade and the poor students in the PTU. Here it is necessary to consider the individual occupational skills and the inclinations of the student toward one occupation or another.

It is now important to establish in the country a state system of occupational orientation for school students. To perfect the most rational variant of a state occupational orientation service, it is planned to establish an entire series of experimental centers, the staffs of which will include teachers, psychologists, physicians, sociologists, representatives of the leading production sectors of the region, and other specialists. Knowing the needs of the economic region and having examined the individual characteristics and abilities of the school children, they can provide qualified help in selecting the most suitable profile of production instruction for teachers and methods experts, and they can also consult with parents and the students themselves.

This system will also be carried out in the schools. There will be a new course called "Basics of Production--Choosing an Occupation," and there will be consultations in schoolrooms for occupational orientation, excursions to enterprises, etc. The pedagogical councils will play a greater role in recommending further paths of education to students.

It is intended that Pioneer Palaces, stations for young technicians and young naturalists, clubs, sports, music and other schools, and other centers where children spend time after their lessons will provide active help in selecting the future occupation.

The dialectics of the school development outlined by the party is in the fact that the entire labor and occupational training of the students must be based upon further substantial improvement in all-round training. The assimilation of a particular specialty is called upon to extend the spectrum of the life choice for the school child, but, at the same time, the orientation toward intensified study of one subject or another presupposes a thorough mastery of all disciplines.

The realization of the transition to universal occupational education is no simple matter. We must consider the lessons of the 1960's, when the transition to occupational training in the secondary school had to be narrowed substantially because of the lack of the essential conditions and a suitable basis. Much has been done in the 25 years since that time, but significantly more remains to be done.

Marx characterized labor as "an expedient human activity," and it is therefore extremely important not to allow formalism in the organization of the labor activity of students. Labor is not senseless, formal or mechanical, but genuine, when the goal is clear and when the means are chosen sensibly and lead to a real and socially useful result.

The relations of the schools and production are being rebuilt. Whereas previously the schools had sponsors in production that might "patronize" them and

also might ignore their requests, it is now a matter of equal cooperation. And the sponsors share equal responsibility with the schools for organizing the work in labor education. These relations will be consolidated through legislation. A special statute on the base enterprise has been worked out. Enterprise specialists will be the teachers and mentors of the children in training-production workshops in the schools and in the training shops of production.

And economic managers and enterprise collectives must understand that it is not just a matter of good organization of the labor of students. In production, the entire environment as well as the rhythm of the work, the order and discipline educate.

It is no secret that some parents are disturbed by the prospect of seeing their son or daughter in a vocational and technical school after the ninth grade. Much is being done to raise the prestige of this type of educational institution. Indeed, enrollment in PTU's will gradually be doubled over the current level. In essence, these schools will become a forge for worker occupations. A unified type of educational institution, the Secondary Vocational and Technical School (SPTU), is being developed in the country, with the corresponding occupational departments, especially for new sectors, including those established using microprocessors, robotics and other contemporary achievements of science and technology. SPTU graduates are granted the same rights as students when they enroll at VUZ's and they will have a number of material privileges. All of this will doubtless lead to a considerable influx of young people into vocational and technical schools and will raise the authority of these schools among students and parents.

School reform is imbued with the most profound concern for the teacher, his authority and the prestige of the teaching profession.

From 1 September 1984 through 1 September 1987, teachers and other employees in education will receive an average salary increase of 30 to 35 percent. This measure will affect 6 million people and requires about R3.5 billion annually.

There will be further development in the system of additional payments and increases for class leadership, checking exercise books, managing classrooms, and the like, and also for the corresponding skill category.

Formalism is the worst enemy of the educational system. In pedagogics as practiced in the schools, one must keep in mind particularly well the advice of V. I. Lenin to the effect that to compose a single formula or one rule "that would apply in all cases is an absurdity."

In the final analysis, the success of the system is determined by the ideological and theoretical preparedness and the methodical mastery of the teacher and by the culture of his labor. That is why it is necessary to have more confidence in the teacher, do less regulating through an abundance of instructions of all sorts, and create the most favorable conditions for the demonstration of initiative and systematic inquiries.

The experience of teachers-innovators is our gold mine, the source for constant improvement in the methodology of teaching. It must be enriched in every way possible and used rationally. The "Pedagogika" publishing house is expanding the number of books published in the series "Pedagogic Quest: Experience, Problems and Findings."

Much is being done to improve the training of teaching personnel. In the pedagogical educational institutions, they are introducing continuous pedagogical practice beginning with the first course. In a number of specialities (mathematics, Russian language, labor training and others), the period of instruction is being extended to 5 years, there is increased special admittance of students to pedagogical VUZ's, including young men released from the Soviet Army into the reserves, and pedagogical departments or sections will be opened at the universities. There is an increase in scholarships to students of pedagogical VUZ's and in supplementary payments to students of pedagogical schools.

Great efforts are required of the Komsomol and trade unions and of the labor collectives. It involves national work and no one can remain on the sidelines. There will be 100,000 new children's sectors in club institutions opened up as well as circles, 16,000 children's and adolescent clubs in association with the schools....

It is known that in recent years the schools have increasingly been taking on the functions of education during the out-of-class time. Recall the extended-day groups in the school, the children's rooms and playgrounds at the place of residence, and the other forms of working with children. That is indisputably a positive tendency, but surely it is now time for our mothers and fathers to realize that the family shares responsibility for the education of children. And unfortunately, we do not dedicate very much time to education within the family. So that there might be a high moral life style in the family, it is now necessary to begin education with the pedagogical enlightenment of the parents themselves. That is why specific measures are planned to strengthen the compulsory education of the parents and to raise their responsibility before the labor collectives for the education of their own children.

The discussion of the forthcoming school reform was truly national. The commission of the CPSU Central Committee Politburo under the chairmanship of K.U. Chernenko introduced into the final document about 100 additions, specifications and corrections.

The school problems of concern to all are complex. It is essential to approach their solution very prudently, weighing the strong and weak aspects of all of the proposed improvements, not forgetting about the interests of the system as a whole. For example, many participants in the discussion proposed the introduction of ethics, psychology, logic, world culture, the chess game, dances, and other things into the curriculum. But why increase the number of school subjects? Such innovation would be too great a load on young shoulders.

The problem of the transition to the 5-day work week in the schools interested many parents. The most varied proposals arise here. A significant portion of parents are justifiably afraid that introduction of the 5-day week will lead to an increase in the daily learning load of students, especially homework, since the same volume of learning information will have to be assimilated in 5 school days instead of 6. In addition, after the change in the work order of the institutions in the service sector, many parents work Saturdays, and they too are interested in maintaining the customary study regime. In short, the discussion showed that there should be no hurry about introducing the 5-day work week in the schools.

The school reform places all of Soviet science before some large new tasks. In the next few years, it will be necessary to carry out an abrupt turnaround in the USSR Academy of Pedagogical Sciences, the pedagogical institutes and the universities in the direction of development of the topical problems of the general and the vocational schools, and it will also be necessary to increase the quality and effectiveness of research in the area of the pedagogical sciences and to accelerate the introduction into practice of the results that have been achieved.

In Moscow in the structure of the USSR Academy of Pedagogical Sciences, a new scientific-research institute for the management and economy of education will be organized, and they have created scientific subdivisions for working out problems in the use of computer technology and computers in the educational process and centers for coordinating experimental work directed toward the establishment of an occupational-orientation service.

An All-Union Pedagogical Society and a USSR Central Museum for Education will be established to strengthen the propaganda of pedagogical knowledge and to summarize and disseminate advanced experience.

"The school system is a national matter," is the call of the reform. And here there can be no disinterested observers. The future of the country is being planned today. And no one can be left out.

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EDUCATION

PROBLEMS IN YOUNG FARM WORKER ORIENTATION UNDERSCORED

Moscow SOTSIALISTICHESKIY TRUD in Russian No 6, Jun 84 pp 63-67

[Article by R. Galin, chief of the sector for social problems of the Bashkir Branch of the USSR Academy of Sciences, and M. Fatkullin, chairman of the Bashkir ASSR State Committee for Labor and Social Problems: "Some Problems of the Labor Training and Vocational Orientation of Rural Young People"]

[Text] Among the socio-economic problems of today, the labor training, vocational orientation, and production attachment of young workers are the most urgent. Being exceptionally difficult and multi-faceted, they can be solved successfully only through an integrated approach.

In conditions of practically full employment of the population of working age in the sphere of public production and in studies, young people become essentially the only source of the replenishment of manpower in the national economy. And a special role here belongs to the rural young people. Although at the present time the numerical strength of the population living in the village is constantly declining (in 1982 it was equivalent to 36 percent for the country as a whole), nevertheless, among the young people entering working age, the proportion of those leaving the village, for the country as a whole until the mid-1970's, will exceed the number of those born in the cities.

With respect to migration, the young people are the most mobile part of the population (they constitute up to three-fourths of all the migrants). This is especially a characteristic of the rural young people, who replenish the ranks of the workers not only in the rural locality, but also in the cities, as well as the students of VUZ's, those studying in tekhnikums, vocational-technical schools, and other educational institutions. They predominate in inter-republic and inter-oblast migration. In Bashkiria, for example, rural young people leave the territory of the republic approximately one and half times more often than urban young people. Thus, the regulation of the migration mobility of rural young people makes possible the control of the exchange of the population not only between city and village, but also between individual territories.

The rural rayons of the majority of regions strongly distinguish themselves in terms of the supply of labor resources, in some of them there are surpluses, and in others there are shortages of them. However, the rural schools and the agricultural enterprises, irrespective of the supply of manpower of the rayons,

are making many efforts in regard to the orientation of the school graduates for work in the village. Such a practice reinforces the spontaneity of the migration of a given contingent. For this reason it is important to make a timely and substantiated determination of the proportion of young people in every rural rayon, which is necessary for the formation of its own manpower resources, as well as to make known the possibility of their redistribution in the urban settlements of the region and beyond its bounds. It is also expedient to strengthen the influence of the city on the migration mobility of rural young people in labor-rich rayons. To this end, close relations must be established between the large industrial enterprises and urban vocational-technical schools and the rural schools so as to make it possible to redistribute their graduates systematically in the sectors of the national economy that are most important for the region. This makes it possible to supply the additional manpower requirements of the cities, influence inter-oblast migration, and increase the effectiveness of measures aimed at the attachment of young people in rural rayons with a labor shortage.

The operation of the control of the migration mobility of young people depends in many respects on advances in the socio-economic development of the country. With the transition to general secondary education, on the one hand, and with the development of vocational, secondary specialized and higher education, on the other, there has been an increase not only in the educational level of young people entering working life, but also in the lower age limit of the beginning of work activity. Legally young people in our country may work at age 16, in actual fact they begin to work at age 18-19. In the future, due to the further development of education, this threshold will increase. At the present time, graduates of the 8th grades are practically not sent to work in public production. During the 1970-1980's the proportion of those among them who began to work declined from 12.2 to 1 percent.¹ Thus, for the new generation the period of time for studies is increasing and, consequently, the time for work in public production is decreasing. The increasing time separating young people from productive work must be compensated through its higher productivity. This presupposes an increase in the role of the labor training of the rising generation, its inculcation with labor habits in the process of training, and the acquisition of solid professional knowledge.

During the past few years the ratio of men and women has also changed. If prior to the 1970's men predominated, subsequently more women began to leave the village. This led to a disproportion between men and women of capable age. In the rural rayons there was an increase in the number of men, in the cities--of women. Regardless of the fact that the number of women attracted to the sphere of public production from private subsidiary farming and housework is growing, their proportion in the average annual number of kolkhoz farmers decreased from 52 percent in 1960 to 46 percent in 1981.

Prior to the 1970's, rural girls, upon completion of the 8th grade, basically remained in the village and, after attaining the age of 16-17, began to work in public production in jobs as milkmaids, calf-herds, etc. With the transition to general secondary education, the age of women graduates is now reaching 17-18, and therefore they can on their own decide the question of changing their place of residence. At the same time, they have the possibility of further education in VUZ's, tekhnikums, or other educational institutions, which

also increases migration. The growing need of the cities for manpower with good general education preparation, and the fact that jobs for this category of the population are still in short supply in the rural locality also are conducive to the intensification of the migration of girls.

Indeed, the level of the development of the economy and the sphere of services to the population in the village for the time being does not yet provide equal ratios between jobs for "men's" and "women's" jobs from the standpoint of their prestige and the requirements of the general education and vocational preparation of the workers. At the same time, the significance of this factor, in our view, is frequently exaggerated. With the development of agricultural production, the non-agricultural sectors, and the non-productive sphere, jobs change, with the lines of distinction for dividing them into "men's" and "women's" jobs becoming obliterated to a significant extent.

At the present time, the part of the rural young people oriented toward production upon completion of the 8th grade is sent to agricultural vocational-technical schools (SPTU). Since the vocational structure of the personnel trained in agricultural vocational-technical schools is such that "men's" vocations are predominant (tractor operators-engine drivers, drivers, etc.), the contingent of the students is recruited mainly by virtue of youths. Thus, in the composition of the students of agricultural vocational-technical schools in Bashkiria in 1981, their share constituted 85 percent.

The teaching of machine operator professions also lies at the basis of the labor training of the senior pupils of the general education school, i. e., it is calculated primarily for youths. So youths, both in school and in the agricultural vocational-technical school, are oriented basically toward receiving workers' professions, i. e., toward production. Girls practically do not have the possibility of selecting one or another work speciality for themselves, apart from the traditional rural ones, which for the time being are basically still very labor-intensive, [and] for this reason they strive for a further increase in education in higher and secondary specialized educational institutions. Hence also a certain feminization of the contingents being trained in VUZ's and tekhnikums. Among the students of the tekhnikums of the country, for example, the proportion of girls increased from 47 percent in the 1960/61 academic year to 57 percent in 1981/82, among the students of VUZ's--from 43 to 52 percent respectively. It is no accident that the share of women among the specialists with a higher and secondary specialized education employed in the national economy constitutes 59 percent for the country.

The transfer of agricultural production to the intensive path of development has affected both the training of skilled personnel and the vocational orientation and labor training of the rising generation. However, the training of skilled personnel is concentrated mainly in the system of vocational-technical schools, and the schools occupy themselves with vocational orientation and labor training of young people. At the same time, in conditions of an insufficient number of agricultural vocational-technical schools, the secondary schools, too, have begun to train personnel for the village (above all, tractor operators, combine operators, and drivers). In so doing, they extended great assistance to the kolkhozes and sovkhoses in the replenishment of their skilled manpower.

At the present time it is proposed that the training of skilled personnel for the village be mainly concentrated in the vocational-technical schools. This is caused, on the one hand, by the increase in the role of the very system of vocational-technical education, the quantitative growth of the agricultural vocational-technical schools, and, on the other, by the rapid rates of the equipment of the agricultural sector with complex technology and implements, the improvement of the technology of production, and by the broad introduction of the achievements of science and technology in it, which places higher requirements in regard to the level of the vocational training of the personnel. Now the rural school already no longer can be a serious competitor in the training of skilled workers. The absence, in the schools, of new agricultural equipment leads to the fact that training frequently takes place on the basis of obsolete machines, and besides the schools also do not have teachers of the corresponding type at their disposal. For this reason, in our view, in modern conditions the rural school must concentrate its main attention on vocational-technical orientation and the labor training of pupils. Of course, this does not mean that the students must be separated from agricultural technology and that labor training must be based exclusively on manual labor. It seems to us that the professional training of pupils must be built on the basis of the most up-to-date technology through the cooperation of the schools with the agricultural vocational-technical schools, i. e., they must act as mutually interested partners in the vocational orientation of young people and in the training of skilled personnel for the agro-industrial complex. The cooperation of the school with the vocational-technical school makes it possible to eliminate the dissipation of funds for the equipment of schools with tractors and other agricultural machinery and to strengthen the material-technical base of the vocational-technical school, to expand their network.

Such experience of the establishment of the interdependence of the school and the vocational-technical school exists in Leningrad Oblast. If in 1977 one-third of the 8th graders entered a vocational-technical school, in 1981--it was two-thirds. The Ministry of Education and the State Committee for Vocational-Technical Education of the MSSR Council of Ministers are preparing methodic recommendations for the joint work of general education schools and vocational-technical schools in regard to the vocational orientation of pupils, are organizing consultation centers for the parents of pupils at the base of the vocational-technical schools, and are developing and implementing measures for the staffing of the schools with young people, taking into account their health, interests and abilities. However, such relations of the school with vocational-technical schools for the time being have an initiatory character.

The absence of relations between the school and vocational-technical schools lead to the fact that the latter, called upon to train skilled personnel for production, draw their enrollment from students who have finished school with the grade of "satisfactory". The data of sociological investigations show that only 2 percent of the students of vocational-technical schools studied with the grade of "excellent" in school.²

The low prestige of the vocational-technical schools in the eyes of the pupils and their parents leads to the fact that the possibilities for the training of highly-skilled personnel embodied in this system are not fully realized. At

the present time, the school is not interested in the orientation of 8th-grade graduates toward enrollment in agricultural vocational-technical schools because of the reduction the contingent of students and, consequently, a possible reduction of school hours for the teachers of the senior classes. At the same time, the developing system of vocational-technical education noticeably suffers from the shortage of teachers, and the departmental barriers that have developed complicate the practical redistribution of teaching personnel between the school and the agricultural vocational-technical schools, which artificially increases their deficit.

At the same time, the rural school must not lose its link with production. The kolkhoz, sovkhos or other enterprise of the agro-industrial complex, on the one hand, and the school, on the other, are obliged to participate together in the labor training of the students. The development of vocational training in the general education school led to the fact that chief attention started to be given to those aspects of agricultural labor which are related to scientific-technical progress. Thus, the methodical recommendations emphasize, above all, the industrial characteristics of agricultural work. Undoubtedly, the mechanization of agricultural production, its chemicalization and land improvement, and the broad introduction of the achievements of science have brought about a noticeable change in the character and content of agricultural work and have brought it closer to industrial work. However, irrespective of all-round mechanization and the intensive forms of the management of agriculture, such peculiarities of it as urgency, seasonal prevalence, work in the open air, the exchangeability of places of work, and others are not being eliminated. V. I. Lenin wrote: "... There are characteristics of agriculture which are absolutely irremovable (if we leave aside the too remote and too problematical possibility of the laboratory manufacture of protein and food. As a consequence of these features, large machine industry in agriculture will never distinguish itself by all the characteristics which it has in industry."³ The development of a one-sided conception of agricultural work among students as work which is completely mechanized and industrial leads to the fact that, when they come to production and having collided with manual labor-intensive processes, the young people are disappointed, and frequently a negative attitude manifests itself among them toward this important sphere of public activity. For this reason it is very important for the pupils to receive, already from the first year of study, a fuller concept of agricultural labor and to possess elementary habits. Various forms of work may be conducive to this, especially work and recreation camps for students.

The orientation of young people toward the choice of a profession is determined in many respects by the influence of the family. The relatively low education of the members of the rural family of the older generations, the high combined employment in public production, in private subsidiary farming and housework limit its possibilities of direct influence on the vocational orientation of the rising generation, on the choice of a vocation by the young people. However, the rural family exerts an enormous indirect influence on the social and vocational orientation of the children, above all toward agricultural work. The child first becomes acquainted with elements of agricultural work in the family through private subsidiary farming. The closeness to nature helps him to get to know agricultural work. However,

during the past two decades significant socio-demographic changes have taken place in the rural family, which have influenced the development of labor arrangements and the vocational orientation of the rising generation. Only during the 1960's and 1970's, the majority of parents of school graduates were participants in the Great Patriotic War or endured its burden on the home front. Regardless of the fact that the average size of the rural family was rather large, it frequently consisted of one parent and children (in the majority of cases without the father). Often such families included people of different generations and different ages. The conditions of life compelled them to pursue private and subsidiary farming, where there was a place for the application of labor for both the elderly and the children, i. e., agricultural work was experienced from childhood.

At the present time, the majority of the parents of school graduates were born during the post-war years. There has also been a reduction in the average size of the rural family, i. e., there has been a reduction in the number of children, and there has also been a decline in the proportion of families whose composition includes several generations. If in 1970 the rural family consisted on the average of 4 members, in 1979 it consisted of 3.8.⁴ Great changes have also taken place in the level of education of the parents. For example, the number of kolkhoz farmers with a higher and secondary (complete and incomplete) education, calculated per 1,000 people, rose from 393 in 1970 to 634 in 1981, i. e., by a factor of 1.6.⁵ There has also been a change in the attitude toward private subsidiary and household farming of the rural population. There has been an increase in the number of families which do not engage in private subsidiary farming, and municipal services, appliances and devices facilitating housework have entered the everyday life of villagers.

At the same time, in examining the problems of the labor training of the rising generation, it is impossible not to take into account the fact that in the village there is an increase in the number of children who study in boarding schools. So an increasingly large part of them turns out to be outside the influence of the family. For this reason there is now an increase in the number of children who do not take part in private subsidiary and household farming. The role of the latter in the formation of labor arrangements and the orientation of the rising generation toward agricultural labor is gradually being lost. As the research of sociologists shows, children who have been raised in families with private plots and who have worked on them, upon the completion of school, more frequently than others select agricultural vocations and remain in the village.

In our view, we must search for possibilities of strengthening the influence of the family on the vocational orientation of the rural young people. Let us take, for example, the same problem of the boarding school system of education, which, as it were, beforehand forms a potential migrant. Already now one may escape its negative influences. You see, the development of roads, which is receiving an especially broad scope in connection with the realization of the Food Program, provides the possibility of organizing the transfer of children and teachers from their home to the school. For this, the rural schools will have to be supplied with buses, after inter-school motor transport enterprises have been created. This will make it possible to expand the

training of children without isolation from the family. At the same time, taking into account the difficulties in enlarging rural population areas, as well as the reduction of the contingent of students as the result of demographic conditions in the village, we must plan and build small-capacity rural schools and then reduce the number of boarding schools. In the boarding schools it is necessary to strengthen the labor training of the children so as to make up for the loss of family training.

We understand that the questions we have examined do not exhaust all the problems of the labor training and vocational orientation of rural young people, but their solution, in our view, will to a large extent be conducive to the improvement of the supply of agriculture with labor resources.

FOOTNOTES

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EDUCATION

VOCATIONAL TRAINING OF SECONDARY SCHOOL GRADUATES EXPANDED

Moscow NAUCHNYY KOMMUNIZM in Russian No 2, Mar-Apr 84 pp 76-82

[Article by A.I. Kropachev, candidate of Philosophical Sciences "Specialists with Secondary Vocational Training in Conditions of Developed Socialist Society"]

[Text] At the contemporary stage of development, the most important goal standing before the Soviet country is "to provide for the further economic progress of society, profound qualitative improvements in the material and technical foundation on the basis of the acceleration of scientific and technical progress, the intensification of public production and the raising of its effectiveness" ("Materials of the 26th CPSU Congress," Moscow, 1981, p. 137). Such an aim requires effective utilization of labor resources too, including the multi-million member army of specialists with secondary training. In a developed socialist society, under the influence of NTR, the significance of these specialists is intensified and their role in both the production and non-production spheres is increased. Great changes are taking place in the content and character of labor with respect to this category of specialists, their professional and social functions are becoming more complex and conditions are being established for their harmonious development as workers.

In 1982, it was calculated that there are 25.8 million people with secondary vocational training. Out of the total number of such specialists, in 1981 17.2 million worked in the national economy (see "The National Economy of the USSR, 1922-1982: Jubilee Statistical Almanac," Moscow, 1982, pp 42, 407). If the overall number of blue and white collar workers increased by 1.5 times from 1965 to 1982, the number of specialists with secondary vocational training increased by 2.4 times (ibid. pp. 399, 407). The fastest rate of growth in their training for the last ten years (1970-1981) occurred in vocations connected with construction (1.6 times), agriculture (1.4 times), transport and economics (1.3 times), various sectors of industry, such as the food industry (1.5 times) and the woodworking and paper industry (1.3 times).

As far as the training of specialists in tekhnikums for such important industrial sectors as energy, metallurgy, machine building and chemistry is concerned, the greatest number were trained in the 1960s. In the 1970s, fewer

were turned out, as the demands for specialists with secondary vocational training in these sectors were satisfied for the most part.

Under the influence of the scientific and technical revolution, essential changes are occurring (primarily in sectors of physical production) in the content and character of the work of specialists with secondary vocational training. During the last ten years, in sectors of the country's national economy, there has been an active process of technical improvement of production and an introduction of achievements of scientific and technical progress. In enterprises, the number of mechanized flow lines has grown from 89.5 to 145.3 thousand, while automated lines have grown from 10.9 to 27.4 thousand. For the same period, on a yearly average, 3-4 thousand new types of machines, equipment, apparatus and instruments were placed in operation (ibid. pp. 132, 129). In every sector, a significant amount of new progressive technology has been introduced.

The growth of production automation, the use of complex technological processes and the union of science with production have increased the role of engineering and scientific and technical activity in the sectors of the national economy. In turn, these processes have caused an imperative need for expanding the volume of overall scientific and overall technical knowledge among specialists with secondary vocational training obtained in educational institutions. In practical terms and in ever increasing measure, each of them must have knowledge in the areas of mathematics, physics, chemistry, electrical engineering, radio engineering, etc. For example, teachers, middle level medical personnel, economists, bookkeepers who use complicated apparatus, instruments and calculating machines in their work must know the principles of their operation, how to use them.

Scientific and technical progress leads to the complication of connections of various production links and an increase in the volume of information, on the level of the shop, the section, the brigade, the shift, etc., where the most significant group of technical specialists works in production organization and management. It is becoming continually more imperative for them to have scientifically based knowledge of management of a production collective (according to theories of management, production education and psychology, and operational and labor law), as well as a high level of general culture, inasmuch as such a specialist, as a rule, is the manager of a collective of workers who have a growing general level of education. Thus, if in 1970 59% of workers had higher and secondary (complete and incomplete) education, in 1982 the figure was 80 percent; the corresponding figures among kolkhoz members were 39.3 percent and 65.6 percent (ibid. p. 45).

The professional functions of specialists with secondary education have changed materially. Their training had always led to the fulfillment of the requirements of labor organizers and technical managers of production subdivisions (link, brigade, section, shift), as well as to the fulfillment of independent work requiring a fairly high degree of theoretical knowledge and professional skills in various sectors of the national economy, especially in national education, public health and culture. Under the conditions of a developed socialist society, under the influence of NTR [Nauchnotekhnicheskaya revolyutsiya-Scientific Technical Revolution] many such labor professions

have appeared which require secondary, as well as higher, education from production workers. Among these, the following professions are becoming more and more popular: electrician, electrician-metal worker, electromechanic, machinist, operator, machine operator, traffic controller, adjuster, etc. An analysis of the correlation dynamics of various professionally trained groups of workers according to their character attests to the steady growth in the national economy of the proportion of trained labor primarily with respect to the aforementioned professions. Thus, in the country's industry, according to the results of the all-union census of 1979, the proportion of workers in the fifth category and higher grew to 23 percent and, in construction, to 31.5 percent (see "Statistical Bulletin," 1980, no. 6, pp 63-66).

The NTR also promotes the appearance in production of non-mass level labor professions of very high qualification (especially in enterprises of radio engineering, electronics, microelectronics and atomic industry), for whose rapid mastery an educational level not lower than secondary vocational is required. Taking these changes into consideration, the USSR State Committee on Labor and Social Questions established a special list in 1977 of 380 labor professions whose work may be done by specialists with secondary education not lower than the fifth or sixth category.

Analogous processes, connected with changes in the content of labor and labor professions are also occurring in other sectors of the national economy. The introduction of industrial methods of production in agriculture, wide use of complex machines and industrial treatment of production where it is obtained are radically changing the character and content of kolkhoz peasants' professions. The proportion of heavy physical and unskilled labor is decreasing, while the proportion of intellectual and creative work is growing. The number of professions of an all-around character in the servicing and maintenance of specific machine systems is increasing. The labor content of such workers presents continually higher requirements for the level of their education and training. This is expressed most strikingly in the case of operators in animal husbandry complexes and in automated greenhouses. Although their work is agricultural, its methods are essentially industrial. Ever more frequently, it becomes necessary for such workers to have not only a general secondary education, but also vocational training, received in secondary vocational and technical schools and in tekhnikums.

In the USSR Foodstuffs Program, approved by the May (1982) CC CPSU Plenum, the following goal was set: to complete, on the whole, the complex mechanization of agriculture and animal husbandry by 1990. Its accomplishment will undoubtedly cause a further rapid growth in the level of general secondary and vocational education and training of agricultural workers.

The noted changes in the content and character of the work of specialists with secondary training must be taken into account with respect to determination of prospective plans for their training according to the sectors of the national economy and their concrete utilization in production, as well as in the organization of the educational process and of scientific and technical creativity among students in tekhnikums. These special features are, in a certain measure, taken into account in the new study programs according to which the training of specialists began in tekhnikums as of the 1983/84 school year.

In 1979, more than 7 million people with higher, unfinished higher and secondary vocational education were working in workplaces (see "The Development of the Working Class in Socialist Society," Moscow, 1982, p. 225). In addition, the utilization of specialists in workplaces must not be considered simply as an objective necessity of modern production. A significant number of specialists occupy workplaces at the present time where the level of their training is not a result of production needs.

In 1981, 20 percent of graduates of institutions of higher education and tekhnikums worked in positions which did not require the appointment of professionally qualified specialists (see "Sovetskaya Rossiya," 1983, 13 March). There are many reasons for such a situation: insufficient salaries for specialists with secondary training, reduction of positions for them, not always qualified training of specialists, disparity in the structure of demand and training of specialists in tekhnikums. Our research, conducted at industrial enterprises in Ufa, indicated that among specialists with secondary training, a third occupy workplaces because of higher salary, a fifth because of lack of a technical position and an eighth because they are not prepared to work in a technical position.

In our view, the following measures may aid in solving this problem: the establishment of firmer contract relations between the tekhnikums and the enterprises in the training of specialists; expansion of the training of specialists and technicians on the basis of full secondary education; control by the organs of direction and planning over the utilization of specialists who have completed special secondary educational institutions not only as day students, but as evening and correspondence students as well; greater expansion of the practice of establishing tekhnikums and their branches at large enterprises; improvement of salaries for technical specialists, taking into account their greater differentiation depending on training and complexity of work accomplished.

The utilization of specialists with secondary vocational education in workplaces which require an appropriate level of training has changed the social function of the system of secondary special education. If in the past the training of specialists was accomplished through this system only in order to replenish the ranks of the intelligentsia, under the conditions of the developed socialist society, only a part of the secondary special educational institutions has retained this function (pedagogical, juridical, medical, art, musical and a few others). As before, they train specialists and replenish the stratum of intelligentsia corresponding to the sectors of the national economy, while at the same time the industrial, construction, transport, agricultural and other tekhnikums, along with training specialists, significantly assist in the replenishment of the ranks of the working class and of the currently small group of highly trained kolkhoz peasants.

At the present time, highly trained workers and kolkhoz members who have, as a rule, secondary special education and are mainly employed in intellectual work have received the generally accepted title "worker-intellectuals" and "kolkhoz-intellectuals." This speaks for the fact that one of the important social functions of the system of secondary special education is the forming of new strata in the structure of the working class and the kolkhoz peasantry.

Wide acceptance of workers and kolkhoz members for instruction in secondary special educational institutions establishes the conditions for accelerating the growth rate of education for physical laborers. For example, out of 1000 individuals in the country occupied with physical labor in the national economy, in 1959, 325 of them had higher and secondary (finished and unfinished) education; in 1982 the figure was 785 people. For workers occupied with intellectual labor, this index was 896 people in 1959 and 984 people in 1982 (see "The National Economy of the USSR, 1922-1982," p. 45). It is evident from this data that the growth rate of the educational level among physical laborers markedly surpasses such rates among intellectual workers (on a yearly average, they constitute 6 percent and 0.4 percent respectively). Computing for 1000 people employed in the national economy, the proportion of those with higher and secondary special education has grown from 142 in 1959 to 266 in 1979 (1.8 times), while the proportion of workers with such education has grown from 22 to 90 individuals (4 times).

The increased educational level of the working class and the kolkhoz peasantry naturally promotes their more creative attitude to work, their active participation in production management, their discipline and the growth of their cultural level.

On the basis of the social division of labor, intensifying the differentiation of specialists with secondary training according to functions in the process of reproduction and according to one or another social stratum leads to the fact that they do not now comprise a unified social and professional group, as was the case before.

As has been mentioned already, under the conditions of a developed socialist society, the social function of the system of secondary special education, connected with the replenishment of the ranks of the intelligentsia, undergoes changes. From this point proceeds the equalization of the educational level of its separate strata. This relates to workers who occupy technical engineering posts, but who, for various reasons, do not have special education. Purposeful work in the instruction of "practical workers" in correspondence institutions of higher education and in tekhnikums yields noticeably positive results. In the country's agriculture in 1961, the proportion of "practical workers" among kolkhoz chairmen constituted 42 percent, while in 1980 it was only 3.3 percent (see "The National Economy of the USSR in 1960: Statistical Annual," Moscow, 1961, p. 525; "The National Economy of the USSR, 1922-1982," p. 318). The proportion of "practical workers" in agriculture is markedly reduced among middle link managers (department and brigade managers and heads of farms). During the years of the tenth five-year plan, about 20,000 managers of such production subdivisions completed correspondence instruction and received higher and secondary special education (see "The Agricultural Labor Force," 1982, No. 5, p. 81).

Conditions are now being established for the more rapid growth of the rural intelligentsia and the equalization of its proportions in city and country. In the space of four decades (1937-1977), the number of specialists with higher and secondary special education increased by 34 times in industry and by 47 times in agriculture. This growth will continue in the future too. The resolution of the CC CPSU and the USSR Council of Ministers taken in May 1982,

"On the further strengthening of kolkhozes and sovkhoses by managing staff and specialists and on the increase of their role and responsibility in the development of agricultural production," was directed toward a resolution of this task.

In connection with the improvement of agricultural management in accordance with the May and November (1982) resolutions of the CC CPSU Plenums, many specialists with primarily agricultural training are being transferred to work from the city to the country, which will promote an even more rapid growth of the rural intelligentsia. Thus, in the RSFSR alone, about 1700 specialists were sent into agriculture during 1982; of these, 346 were managers of the middle link (see "Izvestiya," 1982, 10 October).

The system of secondary vocational education is more active than the higher school system in assisting in the formation of the intelligentsia with respect to people of working class or kolkhoz peasant origin, inasmuch as the proportion of students representative of these strata of society is significantly higher in institutions of secondary education. It should be mentioned that people whose origins are in the intelligentsia ever more often, after completing secondary vocational educational institutions, replenish the ranks of the working class. Our research, conducted in Ufa, indicated that among workers with secondary vocational training, those whose origin is in the intelligentsia constitute 10 percent, those of white-collar origin, 13 percent, those of kolkhoz origin, 31 percent and those of working class origin, 46 percent.

The system of secondary vocational training plays a great role in attracting women specialists to sectors of the national economy. Changes in the structure of the national economy and scientific and technical progress have led to a growth in the need for women specialists. In 1981, women with secondary training constituted more than 62 percent of all those working in the national economy (see "The National Economy of the USSR, 1922-1982," p. 408). At the same time, the predominance of women among specialists with secondary vocational training is characteristic of sectors in the non-physical sphere (education, public health, culture, etc.). They are significantly fewer in industry, construction, transport, communications and agriculture.

The gradual equalization of the proportions of men and women among specialists with secondary training in the sectors of the national economy in the country is one of the indices of the growing influence of women in the life of the Soviet socialist society. But this is not proceeding in the desired manner in all sectors. While a stable tendency has taken shape from 1965 to 1982 to increase the proportion of women in the student composition of industrial construction, transport and communications tekhnikums (from 35 to 44 percent), the proportion of women among students in agricultural tekhnikums has remained unchanged during this period (36 percent).

As far as secondary vocational educational institutions in the non-physical sphere are concerned, they are continually becoming more "monopolies" of women students. In economic and legal tekhnikums from 1965 to 1982, the proportion of women students grew from 80 to 85 percent; in public health, physical culture and sport, from 87 to 90 percent; in education, art and cinematography, from 81 to 86 percent (ibid. p. 517).

Secondary vocational education fulfills an important social role by promoting a more harmonious development of the worker himself. Research confirms that for individuals with this level of education, a more creative attitude toward work is characteristic, more active participation in improvement and inventiveness, in production management and social work than is the case for individuals who have a general secondary education. For example, the proportion of participants in improvement and inventiveness among those who have secondary vocational training is twice as high as for those who have a general secondary education (see "The Spiritual Life of the Soviet Village," Moscow, 1982, p. 142).

A rapid rise in the cultural and technical level of the working class and the kolkhoz peasantry, a continually more active replenishment of the intelligentsia by those of working class and kolkhoz origin, as well as the very rapid growth rate of intelligentsia in the village, caused by the development of the secondary vocational training system, all promote the gradual surmounting of the present social differences between classes and strata of the developed socialist society, between the city and the country, and their further rapprochement.

Questions of the improvement in training of specialists with secondary qualification and their rational utilization under conditions of the developed socialist society are always found at the center of attention of the CPSU and the Soviet government. In May 1963, the CC CPSU and the USSR Council of Ministers passed the resolution "On measures for the further development of higher and secondary vocational training and improvement in the preparation and utilization of specialists," where the imperative need was noted for "planning the training of specialists, providing for a higher development rate of secondary vocational training on comparison with higher education, in order that by 1970, in industry, construction, transport, communications and agriculture, for every specialist with higher education there should be 3-4 specialists with secondary vocational training" ("Resolutions of the Party and the Government on Economic Questions," Moscow, 1968, vol. 5, p. 328). The 23rd CPSU congress stressed that "The Soviet national economy is experiencing large shortcomings with regard to workers with secondary vocational training. For that reason, provision is made to increase the admission of students into tekhnikums by approximately 1.5 times, bringing the number up to 1 million 600 thousand people by 1970. It is imperative to think out and implement improvements in the organization of all study work in tekhnikums in accordance with modern requirements" ("Materials of the 23rd CPSU Congress, Moscow, 1966, p. 164).

In August 1974, the CC CPSU and the USSR Council of Ministers passed the resolution, "On measures for the further improvement of the direction of secondary vocational education institutions and on the improvement of the quality of training specialists through secondary vocational education" (see "Resolutions of the Party and the Government on Economic Questions," Moscow, 1976, vol. 10, pp 253-260). In this resolution was noted the necessity for further development of vocational training in accordance with the goals of building communism and the requirements of scientific and technical progress.

In the General Directions for Development of the USSR National Economy for 1976-1989, it was planned "to train 9.6 million specialists with higher and secondary vocational education" ("Materials of the 25th CPSU Congress," Moscow, 1976, p. 221). Great attention was devoted at the 25th CPSU congress to questions of providing a labor force to regions of intensive development of productive forces, to raising the level of training and of ideological and political education of specialists, and to broadening the material base of secondary vocational and other educational institutions.

In January 1978, the USSR Council of Ministers passed a resolution directed at the further improvement of planning and training of specialists and the improvement of the utilization of graduates of higher and secondary vocational training institutions in the national economy (see "Resolutions of the Party and the Government on Economic Questions," Moscow, 1979, vol. 12, pp 210-213).

In the General Directions for Economic and Social Development of the USSR for 1981-1985 and for the period up to 1990, it is planned in the eleventh five-year plan "to train about 10 million specialists with higher and secondary vocational education. Measures are to be implemented to raise the quality of the training of specialists and to improve their utilization in the national economy" ("Materials of the 26th CPSU Congress," p. 182).

All this will promote the growth in saturation of the sectors of the national economy with specialists. According to the calculations of economists, by 1990 it will be necessary for the country to have 16.2 million specialists with higher and secondary vocational training (see Kostin, L. "The Country's Labor Resources," in "Nauka i Zhizn'" 1980, no. 2, p. 8); as a result, the proportion of specialists with secondary training among the general number of workers will rise from 19 to 20 percent, while among engineering and technical workers it will rise from 60 to 65 percent.

Thus, the effective utilization of specialists with secondary training in the developed socialist society is a complex many-sided process connected with the NTR and a turning point for the national economy toward an intensive path of development.

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EDUCATION

STATISTICS ON SCHOOLS, VOCATIONAL TRAINING FACILITIES

Moscow VESTNIK STATISTIKI in Russian No 5, May 84 pp 64-74

[Article: "Aid for Agitator and Propagandist"]

[Text] "Citizens of the USSR have a right to education. This right is ensured with all kinds of free education and implementation of universal compulsory secondary education of youths." Article 45 of USSR Constitution.

School in the USSR

A general education school is a unified labor and polytechnical school for the education and upbringing of children and youths.

The most important permanent task of the Soviet school--to provide the rising generation with deep and lasting knowledge of the basics of sciences and to develop the ability and the skill of using them in practice.

The April (1984) plenum of the CPSU Central Committee in the resolution "On Basic Directions of the Reform of General Education and Vocational School" noted the great political, socioeconomic and ideological significance of the reform of general education and vocational school as an important composite part of planned all-round improvement of developed socialist society.

The First Session of the 11th Convocation of the USSR Supreme Soviet has approved the resolution "On Basic Directions of the Reform of General Education and Vocational School," which were developed by the CPSU Central Committee. They develop the Leninist ideas on a unified, labor and polytechnical school and its role in molding a new man, contain a scientifically based strategic program for further improvement of universal secondary and vocational education and upbringing of the rising generation in the light of the decisions of the 26th CPSU Congress and the June (1983) and February (1984) plenums of the CPSU Central Committee and fully correspond to the provisions of the USSR Constitution on the rights of citizens of the USSR to education. They outline a broad complex of nationwide measures, which are called upon to raise the work of the Soviet school to a new qualitative level and define prospects of its development.

Table 1. Number of Persons Who Have Obtained Secondary (General and Specialized) Education by Union Republics (thousands of persons)

Union Republics	1971-	1976-	1981-	including		1983
	1975	1980	1983	1981	1982	
USSR	18,994	25,175	14,622	5,024	4,862	4,737
RSFSR	9,671	12,559	7,050	2,452	2,339	2,259
Ukrainian SSR	3,688	4,672	2,667	921	887	859
Belorussian SSR	779	948	529	183	177	169
Uzbek SSR	1,219	1,723	1,109	365	369	374
Kazakh SSR	1,137	1,631	998	339	333	326
Georgian SSR	387	485	282	97	96	89
Azerbaijan SSR	473	709	469	155	157	157
Lithuanian SSR	190	341	207	71	69	67
Moldavian SSR	284	406	223	77	73	72
Latvian SSR	129	173	106	36	36	35
Kirghiz SSR	280	405	259	86	87	86
Tajik SSR	248	400	274	91	90	93
Armenian SSR	241	329	188	64	63	62
Turkmen SSR	194	293	200	66	65	69
Estonian SSR	74	101	61	21	21	20

During the 1971-83 period, 58.8 million persons obtained secondary (general and specialized education), which exceeds the number of those who had obtained secondary education during all preceding years of Soviet power 1.3-fold.

Table 2. Number of Students in Secondary Educational Institutions, Studying to Obtain Secondary Education (at the beginning of the school year)

	(1) Тысяч человек				(2) В процентах к итогу			
	1970/71	1975/76	1980/81	1983/84	1970/71	1975/76	1980/81	1983/84
(3) Всего обучалось ..	10 734	14 645	14 105	12 917	100	100	100	100
(4) в том числе:								
(5) в 9-10 (11) классах дневных общеобразовательных школ ..	4 773	6 229	5 305	4 714	44,5	42,5	37,6	36,1
(6) в 9-11 классах вечерних (сменных) общеобразовательных школ ..	2 842	4 130	4 536	3 971	26,5	31,0	32,1	30,7
(7) в средних профессионально-технических училищах ..	180	1 216	2 168	2 359	1,7	8,3	15,4	18,3
(8) на основных отделениях средних специальных учебных заведений ..	2 937	2 670	2 090	1 873	27,3	18,2	14,9	14,1

Key:

1. Thousands of persons
2. In percent to total

3. Total students

[Key continued on following page]

4. including
5. in 9th-10th (11th) grades of daytime general education schools
6. in 9th-11th grades of evening (shift) general education schools

7. in secondary vocational and technical schools
8. in basic divisions of secondary specialized educational institutions

Under conditions of developed socialism, universal compulsory secondary education of youths is an outstanding achievement of the Communist Party and all Soviet people.

At present, the number of people studying in institutions to obtain secondary education totals 12.9 million persons; in this case nearly one third are obtaining a field of specialization or a profession simultaneously with secondary education.

Table 3. Number of Students of Secondary Educational Institutions, Who are Studying to Obtain Secondary Education, by Union Republics at the Beginning of the 1983-84 School Year

	(1) Всего обуча- лось, тысяч	(2) в том числе							
		(3) в 9-10 (11) классах днев- ных общеоб- разовательных школ		(4) в 9-11 клас- сах вечерних (сменных) об- щественно-пе- дагогических школ		(5) в средних профессиона- льно-техни- ческих учин- лищах		(6) на основных отделениях средних спе- циальных учебных заведений	
		(7) тысяч	(8) в %	(9) тысяч	(10) в %	(11) тысяч	(12) в %	(13) тысяч	(14) в %
(15) СССР	12917	4714	37	3971	31	2359	18	1873	14
(16) РСФСР	6821	1993	31	2160	31	1123	18	1072	17
(17) Украинская ССР	2286	731	32	784	34	416	18	355	16
(18) Белорусская ССР	426	167	39	86	20	100	24	73	17
(19) Узбекская ССР	977	313	32	198	20	201	21	65	7
(20) Казахская ССР	920	356	39	290	31	168	18	106	12
(21) Грузинская ССР	226	120	53	48	21	41	18	17	8
(22) Азербайджанская ССР	410	200	49	123	30	71	17	16	4
(23) Литовская ССР	198	77	39	12	21	46	23	43	17
(24) Молдавская ССР	202	77	38	63	31	33	16	30	15
(25) Латвийская ССР	114	37	32	26	23	25	22	26	23
(26) Киргизская ССР	222	110	50	50	22	39	18	25	11
(27) Таджикская ССР	226	152	67	36	16	24	11	14	6
(28) Армянская ССР	153	82	53	27	18	31	21	12	8
(29) Туркменская ССР	171	102	60	24	14	25	15	16	9
(30) Эстонская ССР	61	27	44	10	16	12	18	11	18

[Key on following page]

* Moreover, persons who have completed a secondary school are studying in secondary specialized educational institutions, and their number at the beginning of the 1983-84 school year totaled 2.63 million persons.

Key:

- | | |
|---|---------------------|
| 1. Total students, thousands | 16. RSFSR |
| 2. including | 17. Ukrainian SSR |
| 3. in 9th-10th (11th) grades of daytime general education schools | 18. Belorussian SSR |
| 4. in 9th-11th grades of evening (shift) general education schools | 19. Uzbek SSR |
| 5. in secondary vocational and technical schools | 20. Kazakh SSR |
| 6. in basic divisions of secondary specialized educational institutions | 21. Georgian SSR |
| 7. thousands | 22. Azerbaijan SSR |
| 8. in percent | 23. Lithuanian SSR |
| 9. thousands | 24. Moldavian SSR |
| 10. in percent | 25. Latvian SSR |
| 11. thousands | 26. Kirghiz SSR |
| 12. in percent | 27. Tajik SSR |
| 13. thousands | 28. Armenian SSR |
| 14. in percent | 29. Turkmen SSR |
| 15. USSR | 30. Estonian SSR |

Table 4. Daytime General Education Schools (at the beginning of the school year)

<u>Schools, Students</u>	<u>1970-71</u>	<u>1975-76</u>	<u>1980-81</u>	<u>1983-84</u>
Total number of schools, thousands...	174.6	149.5	132.5	130.2
including:				
in cities	33.2	32.5	31.9	32.4
in rural areas	141.4	117.0	100.6	97.8
Total secondary schools among them ..	44.2	51.5	56.2	59.0
including:				
in cities	19.3	22.0	23.3	24.0
in rural areas	24.9	29.5	32.9	35.0
Total number of students, millions ..	45.4	42.6	39.5	40.4
including:				
in cities	23.0	22.3	22.1	23.6
in rural areas	22.4	20.3	17.4	16.8
Total number of 9th-10th (11th) grade students	4.8	6.2	5.3	4.7
including:				
in cities	2.8	3.4	2.8	2.5
in rural areas	2.0	2.8	2.5	2.2

The daytime general education school plays the main role in implementing universal compulsory secondary education. The network of secondary schools is constantly increased and their share in the overall number of schools has increased from 25 percent in the 1970-71 school year to 45 percent in the 1983-84 school year. The number of such schools has been increasing at a particularly high rate in the rural area.

Table 5. Number of Students in Extended Day Schools and Groups by Union Republics at the Beginning of the 1983-84 School Year

Union Republics	Number of Students in Extended Day Groups, thousands			In percent to number of 1st-8th and preparatory grade students		
	Total	including in cities	rural areas	Total	including in cities	rural areas
USSR	12,371	6,378	5,993	36	32	42
RSFSR	5,532	3,342	2,190	36	31	46
Ukrainian SSR	2,503	1,326	1,177	44	36	58
Belorussian SSR	390	202	188	33	27	43
Uzbek SSR	1,412	466	946	40	40	40
Kazakh SSR	929	343	586	35	29	40
Georgian SSR	128	59	69	17	15	20
Azerbaijan SSR	381	154	227	33	30	36
Lithuanian SSR	96	63	33	22	21	25
Moldavian SSR	259	86	173	45	41	47
Latvian SSR	85	56	29	31	27	43
Kirghiz SSR	180	57	123	24	27	24
Tajik SSR	196	70	126	21	26	19
Armenian SSR	138	75	63	29	25	36
Turkmen SSR	97	48	49	15	18	13
Estonian SSR	45	31	14	27	23	37

Extended day general education schools or extended day groups are being established for the purpose of expanding public education and creating more favorable conditions for all-round development of students and rendering assistance to the family. The share of students participating in the extended day education totaled 36 percent in the 1983-84 school year compared to 13 percent in the 1970-71 school year and 32 percent in the 1980-81 school year.

Table 6. Labor Training of Students in Secondary General Education Schools by Union Republics at the Beginning of the 1983-84 School Year

	(1) Число дневных средних общеобра- зователь- ских школ, осущест- вляющих трудовое обучение	(2) Число учащихся 5-10 (11) классов, прошед- ших трудовое обучение, тыс	(3) в том числе на предприятиях и в организациях, процентов					(8) торгов- ли, об- ществен- ного пи- тания
			(4) промыш- ленно- сти	(5) сель- ского хозяй- ства	(6) транс- порта и связи	(7) строи- тельства		
(9) СССР	58 240	4 589	27,3	35,9	15,5	3,6	5,2	
(10) РСФСР	27 461	1 945	33,3	32,9	13,4	3,4	5,8	
(11) Украинская ССР	8 599	706	30,5	32,4	17,4	4,5	5,4	
(12) Белорусская ССР	2 380	163	24,5	29,6	18,5	3,0	10,9	
(13) Узбекская ССР	5 597	489	17,7	33,3	14,5	5,6	6,5	
(14) Казахская ССР	3 963	351	20,5	47,2	14,7	5,6	4,6	
(15) Грузинская ССР	1 775	119	22,1	42,9	24,6	0,2	0,7	
(16) Азербайджанская ССР	2 173	199	25,8	43,2	12,6	0,9	1,6	
(17) Литовская ССР	604	76	26,1	28,5	17,9	2,5	3,9	
(18) Молдавская ССР	880	76	14,6	54,6	15,4	1,8	3,9	
(19) Латвийская ССР	326	36	21,5	17,5	17,2	3,8	8,4	
(20) Киргизская ССР	1 118	106	21,8	50,6	15,8	3,4	2,1	
(21) Таджикская ССР	1 065	115	12,4	51,1	23,8	3,9	2,2	
(22) Армянская ССР	962	80	24,9	28,3	23,9	0,7	0,8	
(23) Туркменская ССР	1 145	102	11,8	55,5	20,2	1,2	1,7	
(24) Эстонская ССР	192	26	30,5	10,8	18,7	1,2	10,6	

[Key on following page]

Key:

- | | |
|---|---------------------|
| 1. Number of daytime secondary education schools carrying out labor training | 10. RSFSR |
| 2. Number of 9th-10th (11th) grade students who had labor training, thousands | 11. Ukrainian SSR |
| 3. including at enterprises and in organizations, percent | 12. Belorussian SSR |
| 4. industry | 13. Uzbek SSR |
| 5. agriculture | 14. Kazakh SSR |
| 6. transportation and communications | 15. Georgian SSR |
| 7. construction | 16. Azerbaijan SSR |
| 8. trade and public catering | 17. Lithuanian SSR |
| 9. USSR | 18. Moldavian SSR |
| | 19. Latvian SSR |
| | 20. Kirghiz SSR |
| | 21. Tajik SSR |
| | 22. Armenian SSR |
| | 23. Turkmen SSR |
| | 24. Estonian SSR |

Increasingly greater attention is being devoted in the 11th Five-Year Plan to labor training of students, to their professional orientation. Currently, 99 percent of daytime secondary general education schools in the country are implementing in-depth labor training of students. Labor training is the most important factor in molding an individual as well as a means for meeting the requirements of the national economy in manpower resources. It must instill a liking for work and respect toward people of labor and familiarize students with fundamentals of industrial and agricultural production, construction, transportation and services.

Table 7. Labor Training of Students in Daytime Secondary General Education Schools in Cities by Union Republics at the Beginning of the 1983-84 School Year

	(1) число дневных средних общеобра- зователь- ных школ, осущест- вляющих трудовое обучение	(2) число учащихся 9-10 (11) классов, прошед- ших трудовое обучение, тыс.	(3) в том числе на предприятиях и в организациях, процентов				
			(4) промыш- ленно- сти	(5) сель- ского хозяй- ства	(6) транс- порта и связи	(7) строи- тельства	(8) торгов- ли, об- ществен- ного пи- тания
(9) СССР	23 793	2 459	44,6	5,9	18,5	5,1	8,1
(10) РСФСР	12 788	1 219	49,4	4,8	15,9	4,9	8,6
(11) Украинская ССР	4 071	434	46,0	8,3	19,4	6,0	7,4
(12) Белорусская ССР	869	92	36,8	5,9	22,0	3,6	13,5
(13) Узбекская ССР	1 269	160	28,9	12,4	16,7	5,2	10,7
(14) Казахская ССР	1 266	140	40,8	3,1	21,3	11,6	9,5
(15) Грузинская ССР	628	57	43,0	9,0	30,0	0,5	1,5
(16) Азербайджанская ССР	643	80	49,1	—	17,7	1,8	2,9
(17) Литовская ССР	372	58	34,2	9,8	20,4	3,2	5,1
(18) Молдавская ССР	242	25	37,2	4,8	26,1	3,7	9,6
(19) Латвийская ССР	242	31	23,7	10,3	17,9	4,1	9,3
(20) Киргизская ССР	229	25	47,5	3,0	19,7	9,3	5,6
(21) Таджикская ССР	286	35	31,7	10,2	28,3	9,8	4,9
(22) Армянская ССР	420	45	40,6	—	23,6	1,0	1,2
(23) Туркменская ССР	320	35	25,3	4,4	43,1	2,2	4,6
(24) Эстонская ССР	148	23	32,9	5,1	18,1	1,3	11,8

[Key on following page]

Key:

- | | |
|---|---------------------|
| 1. Number of daytime secondary education schools carrying out labor training | 10. RSFSR |
| 2. Number of 9th-10th (11th) grade students who had labor training, thousands | 11. Ukrainian SSR |
| 3. including at enterprises and in organizations, percent | 12. Belorussian SSR |
| 4. industry | 13. Uzbek SSR |
| 5. agriculture | 14. Kazakh SSR |
| 6. transportation and communications | 15. Georgian SSR |
| 7. construction | 16. Azerbaijan SSR |
| 8. trade and public catering | 17. Lithuanian SSR |
| 9. USSR | 18. Moldavian SSR |
| | 19. Latvian SSR |
| | 20. Kirghiz SSR |
| | 21. Tajik SSR |
| | 22. Armenian SSR |
| | 23. Turkmen SSR |
| | 24. Estonian SSR |

Table 8. Labor Training of Students in Daytime Secondary General Education Schools in Rural Areas by Union Republics at the Beginning of the 1983-84 School Year

	(1) Число дневных средних общеобра- зователь- ных школ, осущест- вляющих трудовое обучение	(2) Число моло- дых учащихся 9—10 (11) классов, прошед- ших трудовое обучение, тыс.	(3) в том числе на предприятиях и в организациях, процентов					(8) то же абс. об- ществе- ного об- разова- ния
			(4) промыш- ленно- сти	(5) сель- ского хозяй- ства	(6) тран- спорта и связи	(7) строи- тельства		
(9) СССР	34 447	2 130	7,4	70,4	12,0	1,9	1,9	
(10) РСФСР	14 673	726	6,1	60,2	9,2	0,9	1,2	
(11) Украинская ССР	4 528	272	5,8	70,8	14,2	2,2	2,2	
(12) Белорусская ССР	1 511	71	8,7	59,9	14,1	2,3	7,5	
(13) Узбекская ССР	4 328	329	12,3	43,5	13,4	1,7	4,5	
(14) Казахская ССР	2 697	211	7,1	76,3	10,3	1,7	1,3	
(15) Грузинская ССР	1 147	62	2,4	74,5	19,7	—	0,03	
(16) Азербайджанская ССР	1 530	119	10,2	72,2	9,3	0,2	0,7	
(17) Литовская ССР	232	18	0,4	87,9	9,7	0,2	0,4	
(18) Молдавская ССР	638	51	3,5	78,8	10,2	0,8	1,2	
(19) Латвийская ССР	84	9	0,6	69,4	11,7	1,7	1,9	
(20) Киргизская ССР	889	81	14,0	65,0	14,6	1,6	1,1	
(21) Таджикская ССР	779	80	4,0	69,1	21,9	1,3	1,0	
(22) Армянская ССР	542	35	4,5	64,9	24,3	0,3	0,3	
(23) Туркменская ССР	825	67	4,7	82,6	8,1	0,7	0,1	
(24) Эстонская ССР	44	3	13,1	51,0	22,9	0,3	2,6	

Key:

- | | |
|--|---|
| 1. Number of daytime Secondary education schools carrying out labor training | 2. Number of 9th-10th (11th) grade students who had labor training, thousands |
|--|---|
- [Key continued on following page]

3. including at enterprises and in organizations, percent
4. industry
5. agriculture
6. transportation and communications
7. construction
8. trade and public catering
9. USSR
10. RSFSR
11. Ukrainian SSR
12. Belorussian SSR
13. Uzbek SSR
14. Kazakh SSR
15. Georgian SSR
16. Azerbaijan SSR
17. Lithuanian SSR
18. Moldavian SSR
19. Latvian SSR
20. Kirghiz SSR
21. Tajik SSR
22. Armenian SSR
23. Turkmen SSR
24. Estonian SSR

Table 9. Provision of Daytime Secondary Education Schools with Training Workshops (without sanatorium-forestry schools; by the beginning of the school year)

	(1) Всего				(2) в том числе							
					(3) в городских населенных				(4) в сельской местности			
	1970/71	1975/76	1980/81	1983/84	1970/71	1975/76	1980/81	1983/84	1970/71	1975/76	1980/81	1983/84
(5) Число дневных средних школ — всего	14207	51423	56130	59014	19294	21945	23278	24036	24913	29478	32852	34978
(6) из них имеют мастерские (в %):												
(7) по обработке металла	40,3	54,3	57,9	56,2	54,6	73,9	78,7	78,3	29,3	39,8	43,3	41,0
(8) деревообрабатывающие	46,7	49,1	62,1	59,6	52,5	71,8	77,8	77,8	42,2	50,4	51,0	47,1
(9) комбинированные по обработке металла	48,1	38,3	3,9	58,3	42,1	24,0	19,9	20,4	33,8	48,9	47,2	50,6
(10) швейные	34,3	47,9	33,5	16,9	53,4	69,4	41,9	21,8	17,7	31,8	27,6	13,5
(11) Принадлежит на одну среднюю школу, имеющих мастерские, рабочих мест	36	38	29	25	48	50	51	50	27	29	31	30

Key:

1. Total
2. including
3. in cities
4. in rural areas
5. Total number of daytime secondary schools
6. which have workshops (in percent)
7. metalworking
8. woodworking
9. combined metalworking and wood-working
10. sewing
11. Work places for work in one shift per one secondary school that has workshops

Students obtain a more thorough general labor training in training workshops, acquire knowledge and practical skill in metalworking and woodworking, become familiarized with the basics of electrical engineering and science of metals and get an idea about the main sectors of the national economy.

Table 10. Provision of Daytime Secondary General Education Schools with Training Workshops by Union Republics at the Beginning of the 1983-84 School Year

	(1) Число дневных средних школ— всего	(2) из них имеют учебные мастерские, процентов				(3) Приходит- ся на одну среднюю школу, имеющую мастер- ские, ра- бочих мест для работы в одну смену
		(4) по обра- ботке ме- талла	(5) дервооб- рабатыва- ющие	(6) комбини- рованные по обра- ботке ме- талла и дерева	(7) швейные	
(8) СССР	59 014	56,2	59,6	38,3	16,9	38
(9) РСФСР	27 583	46,0	49,3	49,4	19,3	38
(10) Украинская ССР	8 661	75,7	77,2	20,4	9,8	45
(11) Белорусская ССР	2 413	44,1	44,7	54,9	4,4	37
(12) Узбекская ССР	5 674	93,6	95,2	2,4	25,3	39
(13) Казахская ССР	3 981	64,7	66,1	33,4	16,1	44
(14) Грузинская ССР	1 779	32,8	46,1	43,3	12,4	28
(15) Азербайджанская ССР	2 174	38,8	39,9	59,8	10,8	32
(16) Литовская ССР	607	77,3	77,8	21,1	0,7	40
(17) Молдавская ССР	886	51,2	52,6	45,7	16,7	37
(18) Латвийская ССР	330	79,4	80,3	18,8	24,8	42
(19) Киргизская ССР	1 125	54,7	65,2	34,3	40,1	32
(20) Таджикская ССР	1 470	37,4	64,4	29,5	19,7	29
(21) Армянская ССР	991	45,1	47,4	48,0	—	37
(22) Туркменская ССР	1 146	29,1	52,9	35,0	15,4	26
(23) Эстонская ССР	191	66,0	63,9	33,0	2,6	36

Key:

- | | |
|--|---------------------|
| 1. Number of daytime secondary schools | 11. Belorussian SSR |
| 2. which have training workshops, percent | 12. Uzbek SSR |
| 3. Work places for work in one shift per one secondary school that has workshops | 13. Kazakh SSR |
| 4. metalworking | 14. Georgian SSR |
| 5. woodworking | 15. Azerbaijan SSR |
| 6. combined metalworking and woodworking | 16. Lithuanian SSR |
| 7. sewing | 17. Moldavian SSR |
| 8. USSR | 18. Latvian SSR |
| 9. RSFSR | 19. Kirghiz SSR |
| 10. Ukrainian SSR | 20. Tajik SSR |
| | 21. Armenian SSR |
| | 22. Turkmen SSR |
| | 23. Estonian SSR |

Table 11. Training and Production Interschool Combines for Labor Training and Professional Orientation of Students by Union Republics (at the beginning of the school year)

	(1) Число комбинатов						(2) В них численность учащихся, проходивших производственное обучение, тыс.					
	(3) всего		(4) в том числе				(7) всего		(8) в том числе			
			(5) в городских поселениях		(6) в сельской местности				(9) в городских поселениях		(10) в сельской местности	
	1980/81	1983/84	1980/81	1983/84	1980/81	1983/84	1980/81	1983/84	1980/81	1983/84	1980/81	1983/84
(11) СССР	2007	2678	1449	1727	558	951	1739	2052	1431	1561	308	491
(12) РСФСР	701	827	611	710	90	117	689	731	648	686	41	45
(13) Украинская ССР	449	494	309	370	140	144	384	372	297	300	87	66
(14) Белорусская ССР	210	235	127	147	83	88	141	139	99	105	42	36
(15) Узбекская ССР	288	633	111	162	173	471	221	430	117	157	104	273
(16) Казахская ССР	117	160	95	123	22	37	99	121	89	98	10	23
(17) Грузинская ССР	19	22	14	16	5	6	13	13	11	11	2	2
(18) Азербайджанская ССР	72	80	54	58	18	22	51	54	44	45	7	9
(19) Литовская ССР	27	34	24	30	3	4	27	37	26	35	1	2
(20) Молдавская ССР	19	37	13	25	6	12	20	24	18	19	2	5
(21) Латвийская ССР	25	26	23	24	2	2	18	18	17	17	1	1
(22) Киргизская ССР	22	33	15	20	7	13	20	28	16	19	4	9
(23) Таджикская ССР	20	32	14	20	6	12	26	37	20	26	6	11
(24) Армянская ССР	12	13	9	9	3	4	12	16	11	14	1	3
(25) Туркменская ССР	21	46	21	27	10	19	11	26	14	19	1	7
(26) Эстонская ССР	7	6	6	6	1	1	1	1	1	6	1	1

Key:

- | | |
|--|--------------------|
| 1. Number of combines | 16. Kazakh SSR |
| 2. number of students in them who had production training, thousands | 17. Georgian SSR |
| 3. Total | 18. Azerbaijan SSR |
| 4. including | 19. Lithuanian SSR |
| 5. in cities | 20. Moldavian SSR |
| 6. in rural areas | 21. Latvian SSR |
| 7. Total | 22. Kirghiz SSR |
| 8. including | 23. Tajik SSR |
| 9. in cities | 24. Armenian SSR |
| 10. in rural areas | 25. Turkmen SSR |
| 11. USSR | 26. Estonian SSR |
| 12. RSFSR | |
| 13. Ukrainian SSR | |
| 14. Belorussian SSR | |
| 15. Uzbek SSR | |

Table 12. Provision of Daytime Secondary General Education Schools with Basic Training Laboratories (without sanatorium-forestry schools; at the beginning of school years)

<u>School Years</u>	<u>Total Number of Day- time Secondary Schools</u>	<u>which have training labs, percent</u>		
		<u>Physics</u>	<u>Chemistry</u>	<u>Biology</u>
Total				
1970-71	44,207	91	84	57
1975-76	51,423	98	95	87
1980-81	56,130	99.2	98	94
1983-84	59,014	99.2	98	94
Cities				
1970-71	19,294	97	93	71
1975-76	21,945	99.5	99	94
1980-81	23,278	99.8	99.3	97
1983-84	24,036	99.7	99.3	97
Rural areas				
1970-71	24,913	87	76	46
1975-76	29,478	97	93	82
1980-81	32,852	99	97	92
1983-84	34,978	99	97	92

An overwhelming majority of daytime secondary general education schools (96 percent) have Russian language and literature training laboratories. More than one half of rural secondary schools have agricultural mechanization training laboratories, 16 percent have motor vehicle training laboratories and 55 percent have tractor training laboratories.

Secondary general education schools are provided with technical training means: television sets, tape recorders, 16 mm movie cameras and their own local radio broadcasting centers.

Table 13. Provision of Daytime Secondary General Education Schools with Basic Training Laboratories by Union Republics at the Beginning of the 1983-84 School Year

	(1) Всего			(7) в том числе								
	(2) из них имеют учебные кабинеты, процентов			(8) в городских поселениях						(9) в сельской местности		
				(10) из них имеют учебные кабинеты, процентов			(11) из них имеют учебные кабинеты, процентов			(12) из них имеют учебные кабинеты, процентов		
	(4) физика	(5) химия	(6) биология	(14) физика	(15) химия	(16) биология	(17) физика	(18) химия	(19) биология	(17) физика	(18) химия	(19) биология
(20) СССР	59 014	99,2	98	94	24 036	99,7	99,3	97	34 978	99	97	92
(21) РСФСР	27 583	99,4	98	95	12 852	99,7	99,7	98	14 731	99,1	97	93
(22) Украинская ССР	8 661	100	99	97	4 130	99,9	99,7	98	4 531	100	98	96
(23) Белорусская ССР	2 413	99,8	99,3	98	887	99,9	99,7	99,1	1 526	99,7	99	97
(24) Узбекская ССР	5 674	99,8	99,7	99,7	1 288	99,9	99,8	99,6	4 386	99,8	99,7	99,8
(25) Казахская ССР	3 981	99,7	99,4	96	1 282	99,7	99,4	97	2 699	99,8	99,4	95
(26) Грузинская ССР	1 779	97	93	80	632	99	98	90	1 147	97	91	75
(27) Азербайджанская ССР	2 174	99	98	95	644	99,8	99,8	98	1 530	98	98	94
(28) Литовская ССР	607	99,8	99,2	98	375	99,7	99,2	98	232	100	99,1	97
(29) Молдавская ССР	886	99	97	86	246	99,6	100	95	640	98	95	82
(30) Латвийская ССР	340	100	98	95	245	100	99,6	96	8	100	97	93
(31) Киргизская ССР	1 127	96	91	88	233	99,6	98	94	892	96	89	87
(32) Таджикская ССР	1 476	94	89	70	311	98	96	87	1 165	93	88	66
(33) Армянская ССР	991	99,2	97	90	440	99,1	98	94	551	99,3	96	86
(34) Туркменская ССР	1 145	96	87	71	321	98	92	82	825	96	86	71
(35) Эстонская ССР	194	98	93	91	150	99	98	94	44	95	77	80

Key:

- | | |
|---|---------------------|
| 1. Total | 17. Physics |
| 2. Number of daytime secondary general education schools | 18. Chemistry |
| 3. which have training labs, percent | 19. Biology |
| 4. Physics | 20. USSR |
| 5. Chemistry | 21. RSFSR |
| 6. Biology | 22. Ukrainian SSR |
| 7. including | 23. Belorussian SSR |
| 8. in cities | 24. Uzbek SSR |
| 9. in rural areas | 25. Kazakh SSR |
| 10. Number of daytime secondary general education schools | 26. Georgian SSR |
| 11. which have training labs, percent | 27. Azerbaijan SSR |
| 12. Number of daytime secondary general education schools | 28. Lithuanian SSR |
| 13. which have training labs, percent | 29. Moldavian SSR |
| 14. Physics | 30. Latvian SSR |
| 15. Chemistry | 31. Kirghiz SSR |
| 16. Biology | 32. Tajik SSR |
| | 33. Armenian SSR |
| | 34. Turkmen SSR |
| | 35. Estonian SSR |

Table 15. Study Group Work in Daytime General Education Schools (at the end of school year)

	(1) Всего			(2) в том числе					
				(3) в городских поселениях			(4) в сельской местности		
	1975/76	1980/81	1982/83	1975/76	1980/81	1982/83	1975/76	1980/81	1982/83
(5) Всего кружков, тыс.	479	481	516	210	213	229	269	268	287
(6) в них учащихся 4—11 классов, тыс.	13 370	12 819	13 628	6 172	6 166	6 715	7 198	6 653	6 913
(7) в процентах к общей численности учащихся данных классов	45	50	54	40	44	47	51	58	63
(8) в том числе:									
число технических кружков, тыс.	143	148	152	68	69	68	75	79	84
(9) в них учащихся 4—11 классов, тыс.	2 743	2 789	2 886	1 325	1 342	1 402	1 418	1 447	1 484
(10) в процентах к общей численности учащихся данных классов	9	11	12	9	10	10	10	13	14
(11) число кружков юных натуралистов и сельскохозяйственных, тыс.	106	110	115	35	38	41	68	72	74
(12) в них учащихся 4—11 классов, тыс.	2 450	2 419	2 556	876	887	962	1 574	1 532	1 591
(13) в процентах к общей численности учащихся данных классов	8	9	10	6	6	7	11	13	14
(14) число кружков художественной самодеятельности, тыс.	230	223	249	104	106	120	126	117	129
(15) в них учащихся 4—11 классов, тыс.	8 177	7 611	8 186	3 971	3 937	4 351	4 206	3 674	3 835
(16) в процентах к общей численности учащихся данных классов	28	30	32	25	28	30	30	32	35

Key:

1. Total
2. including
3. in cities
4. in rural areas
5. Total study groups, thousands
6. 4th-11th grade students in them, thousands
7. in percent to overall number of students of the given grades
8. including: number of technical study groups
9. 4th-11th grade students in them, thousands
10. in percent to overall number of students of the given grades
11. Number of young naturalist and agricultural study groups, thousands
12. 4th-11th grade students in them, thousands
13. in percent to overall number of students of the given grades
14. Number of amateur artistic activities groups, thousands
15. 4th-11th grade students in them, thousands
16. in percent to overall number of students of the given grades

Table 16. Study Group Work in Daytime General Education Schools by Union Republics at the end of the 1982-83 School Year

(1) Численность учащихся 4-11 классов, занимающихся в кружках						
	(2) технических		(3) юных натуралистов и сельскохозяйственных		(4) художественной самодеятельности	
	(5) тысяч	(6) % к общей численности учащихся 4-11 классов	(7) тысяч	(8) % к общей численности учащихся 4-11 классов	(9) тысяч	(10) % к общей численности учащихся 4-11 классов
(11) СССР	2 886	12	2 576	10	8 186	32
(12) РСФСР	1 268	11	1 066	10	3 823	34
(13) Украинская ССР	622	14	501	12	1 641	39
(14) Белорусская ССР	127	14	98	11	310	35
(15) Узбекская ССР	357	14	366	15	931	37
(16) Казахская ССР	141	8	172	9	520	28
(17) Грузинская ССР	74	14	56	10	140	25
(18) Азербайджанская ССР	85	10	91	10	112	12
(19) Литовская ССР	40	12	39	11	118	34
(20) Молдавская ССР	36	9	33	8	183	44
(21) Латвийская ССР	22	11	18	9	92	45
(22) Киргизская ССР	22	4	30	6	77	15
(23) Таджикская ССР	39	6	31	5	69	10
(24) Армянская ССР	14	4	16	5	52	14
(25) Туркменская ССР	25	5	27	6	56	12
(26) Эстонская ССР	14	11	12	9	62	47

Key:

1. Number of 4th-11th grade students studying in groups
2. Technical
3. Young naturalist and agricultural
4. Amateur artistic activities
5. thousands
6. in percent to overall number of 4th-11th grade students
7. thousands
8. in percent to overall number of 4th-11th grade students
9. thousands
10. in percent to overall number of 4th-11th grade students
11. USSR
12. RSFSR
13. Ukrainian SSR
14. Belorussian SSR
15. Uzbek SSR
16. Kazakh SSR
17. Georgian SSR
18. Azerbaijan SSR
19. Lithuanian SSR
20. Moldavian SSR
21. Latvian SSR
22. Kirghiz SSR
23. Tajik SSR
24. Armenian SSR
25. Turkmen SSR
26. Estonian SSR

Table 14. Libraries (Available Books) of Daytime General Education Schools
(at the beginning of the school year)

	(1) Всего				(2) в том числе							
					(3) в городских поселках				(4) в сельской местности			
	1970/71	1975/76	1980/81	1983/84	1970/71	1975/76	1980/81	1983/84	1970/71	1975/76	1980/81	1983/84
(5) Число школ, имеющих библиотеки (книжный фонд)												
(6) тысяч	161,4	139,7	128,6	126,3	31,0	30,2	29,9	30,3	130,4	109,5	98,7	96,0
(7) в процентах к общему числу школ	93,7	95,2	99,2	99,2	97,4	98,2	99,7	99,8	92,8	94,4	99,1	99,1
(8) в том числе школы, имеющие библиотеки с книжным фондом, в процентах к итогу:												
(9) 300 экз. и менее	17,5	14,0	12,0	11,4	3,0	2,0	1,4	1,0	20,9	17,3	15,3	14,6
(10) 301—1000 экз.	26,8	19,5	15,0	11,9	5,6	3,7	2,3	1,8	31,9	23,9	18,8	15,1
(11) 1001 экз. и более	55,7	66,5	73,0	76,7	91,4	94,3	96,3	97,2	47,2	58,8	65,9	70,3
(12) Из общего числа—средних школ												
(13) тысяч	43,9	51,0	56,1	59,0	19,1	21,7	23,3	24,0	24,8	29,3	32,8	35,0
(14) в процентах к общему числу средних школ	99,2	99,2	99,9	99,9	99,0	99,1	99,9	99,9	99,3	99,3	99,9	99,9
(15) в том числе средние школы, имеющие библиотеки с книжным фондом, в процентах к итогу:												
(16) 300 экз. и менее	0,8	0,6	0,4	0,2	0,3	0,2	0,1	0,1	1,2	0,8	0,5	0,2
(17) 301—1000 экз.	3,4	2,8	1,8	1,0	0,9	1,0	0,6	0,2	5,3	4,1	2,7	1,5
(18) 1001 экз. и более	95,8	96,6	97,8	98,8	98,8	98,8	99,3	99,7	93,5	95,1	96,8	98,3

Key:

1. Total
2. including
3. in cities
4. in rural areas

5. Number of schools having libraries (available books)

6. thousands

[Key continued on following page]

7. in percent to overall number of schools
8. including schools having libraries with available books, in percent to total
9. 300 copies and less
10. 301-1,000 copies
11. 1,001 and more copies
12. From overall number of secondary schools
13. thousands
14. in percent to overall number of secondary schools
15. including secondary schools having libraries with available books. in percent to total
16. 300 copies and less
17. 301-1,000 copies
18. 1,001 and more copies

Available books at school libraries are being annually replenished with textbooks, which are provided free of charge to students in 1st-10th (11th) grades.

Table 17. Number of Teachers of Daytime General Education Schools According to Level of Education and Length of Pedagogical Work Service (by schools of the USSR Ministry of Education and the Ministry of Railways; at the beginning of school years)

	(1) Всего учителей (без совмещителей), тыс *	(2) из них имеют (в процентах к итогу)							(5) Процент женщин в общем числе учителей и руководителей школ		
		(3) образование					(4) стаж педагогической работы				
		(6) высшее	(7) незаконченное высшее	(8) среднее педагогическое	(9) среднее специальное (не педагогическое) и среднее общее	(10) не имеют полного среднего образования	(11) до 5 лет	(12) от 5 до 25 лет		(13) 25 лет и более	
(14) Всего											
1970/71	2 361	52,7	12,0	26,9	7,8	0,6	21,2	60,2	18,6	71	
1975/76	2 399	64,3	8,6	21,0	5,9	0,2	20,7	58,8	20,5	71	
1980/81	2 321	72,3	5,5	18,1	4,1	0,0	20,9	57,9	21,2	71	
1983/84	2 360	75,8	4,1	16,8	3,3	0,0	21,5	56,9	21,6	73	
(15) Городские поселения											
1970/71	1 028	63,4	9,0	21,2	5,7	0,7	15,5	66,9	17,6	80	
1975/76	1 061	72,6	6,1	16,3	4,7	0,3	15,4	64,6	20,0	80	
1980/81	1 045	77,3	3,7	15,4	3,6	0,0	16,7	60,9	22,4	82	
1983/84	1 082	79,6	2,8	14,5	3,1	0,0	18,3	58,3	23,4	83	
(16) Сельская местность											
1970/71	1 333	44,5	14,2	31,2	9,5	0,6	25,6	55,0	19,4	64	
1975/76	1 338	57,7	10,6	24,7	6,8	0,2	24,9	54,2	20,9	63	
1980/81	1 276	68,3	6,9	20,3	4,5	0,0	24,3	55,5	20,2	63	
1983/84	1 278	72,5	5,1	18,8	3,6	0,0	24,1	55,8	20,1	64	

Key:

1. Total teachers (without those holding two jobs), thousands
2. of them having (in percent to total)
3. education
4. length of service in pedagogical work
5. Percent of women in overall number of teachers and school supervisors
6. Higher
7. Incomplete higher
8. Secondary pedagogical
9. Secondary specialized (not pedagogical) and secondary general
10. Do not have complete secondary education
11. To 5 years
12. From 5 to 25 years

[Key continued on following page]

13. 25 and more years

15. Cities

14. Total

16. Rural areas

Table 18. Children's Out-of-School Institutions (by the end of the year)

	(1) Число учреждений				(2) Дети обслужено детей, тысяч			
	1970	1975	1980	1982	1970	1975	1980	1982
(3) Все внешкольные учреждения	64 876	80 366	99 306	105 645	27 415	33 842	41 910	45 021
в том числе:								
(4) Дворцы, Дома пионеров и школьников	3 865	4 403	4 844	4 961	1 601	2 196	3 149	3 699
(5) станции юных техников	606	1 008	1 353	1 459	217	355	576	708
(6) станции юных натуралистов	338	587	863	945	131	206	340	423
(7) станции юных туристов	169	202	233	244	1065	1 019	722	628
(8) детские парки	164	155	157	163	37	61	31	54
(9) детские железные дороги	34	38	47	49	29	35	43	42
(10) летние пионерские лагеря	36 088	45 980	59 577	65 318	8 806	9 934	12 085	12 863
(11) детские музыкальные, художественные и хореографические школы	4 510	6 109	7 691	8 130	762	1 080	1 416	1 555
(12) детские библиотеки	6 498	7 586	8 367	8 553	12 810	16 399	20 035	20 684
(13) клубы юных техников	1 089	1 377	1 559	1 420	134	185	249	247
(14) комнаты школьника	7 595	7 424	8 022	7 218	482	576	692	733
(15) детско-юношеские спортивные школы	3 813	5 396	6 473	7 032	1 323	1 777	2 525	3 332
(16) другие детские внешкольные учреждения	87	101	120	153	18	19	47	54

Key:

1. Number of institutions
2. Number of children served by them, thousands
3. Out-of-school institutions, including:
4. palaces, house of pioneers and schoolchildren
5. stations of young technicians
6. stations of young naturalists
7. stations of young tourists
8. children's parks
9. children's railroads
10. summer pioneer camps
11. children's music, artistic and choreographic schools
12. children's libraries
13. clubs of young technicians
14. student rooms
15. children's and youth sport schools
16. other children's out-of-school institutions

For the purpose of all-round development of abilities and aptitudes of students and developing public activity and interest in labor, science, technology, art and sports as well as for organizing cultural rest and strengthening their health that palaces and houses of pioneers, stations of young technicians, young naturalists and young tourists, children's libraries, sport, artistic and music schools, pioneer camps and other out-of-school institutions are established.

* Including supervisors of schools, who, as a rule, conduct pedagogical work simultaneously

Table 19. Number of Children's Out-of-School Institutions by Union Republics by the end of 1982

	(1) Дворцы, Дома пионеров и школьников *	(2) Станции юных техников *	(3) Станции юных натураллистов *	(4) Станции юных туристов *	(5) Летние пионерские лагеря	(6) Детские музыкальные, художественные и хореографические школы	(7) Детские библиотеки	(8) Детско-юношеские спортивные школы
(9) СССР	4 949	1 431	942	244	65 318	8 130	8 553	7 032
(10) РСФСР	2 749	688	410	96	32 644	4 780	4 522	3 478
(11) Украинская ССР	810	269	220	28	16 004	1 245	1 307	1 012
(12) Белорусская ССР	192	44	36	8	3 377	349	312	434
(13) Узбекская ССР	238	88	70	31	2 169	295	446	395
(14) Казахская ССР	332	109	70	21	3 495	426	726	529
(15) Грузинская ССР	85	19	13	5	280	219	273	190
(16) Азербайджанская ССР	90	41	36	3	725	134	87	163
(17) Литовская ССР	61	17	12	15	1 501	81	18	132
(18) Молдавская ССР	72	33	17	16	1 098	103	357	115
(19) Латвийская ССР	39	15	11	1	694	58	109	87
(20) Киргизская ССР	60	18	8	4	226	74	105	92
(21) Таджикская ССР	76	8	7	7	353	90	74	99
(22) Армянская ССР	57	27	10	2	1 473	149	83	140
(23) Туркменская ССР	64	22	19	6	660	80	102	100
(24) Эстонская ССР	24	3	3	1	619	47	32	56

Key:

- | | |
|--|---------------------|
| 1. Palaces and houses of
pioneers and schoolchildren | 11. Ukrainian SSR |
| 2. Stations of young technicians | 12. Belorussian SSR |
| 3. Stations of young naturalists | 13. Uzbek SSR |
| 4. Stations of young tourists | 14. Kazakh SSR |
| 5. Summer pioneer camps | 15. Georgian SSR |
| 6. Children's music, artistic and
choreographic schools | 16. Azerbaijan SSR |
| 7. Children's libraries | 17. Lithuanian SSR |
| 8. Children's and youth sport
schools | 18. Moldavian SSR |
| 9. USSR | 19. Latvian SSR |
| 10. RSFSR | 20. Kirghiz SSR |
| | 21. Tajik SSR |
| | 22. Armenian SSR |
| | 23. Turkmen SSR |
| | 24. Estonian SSR |

* Data is given for children's out-of-school institutions in the system of the USSR Ministry of Education

Table 20. Number of Children Served by Children's Out-of-School Institutions by Union Republics at the end of 1982 (thousands)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Дворцы, Дома пионеров и школьников *	Станции юных техников *	Станции юных натуралистов *	Станции юных туристов *	Летние пионерские лагеря	Детские музыкальные, художественные и хореографические школы	Детские библиотеки	Детские и юношеские спортивные школы
(9) СССР	3 690	740	422	626	12 863	1 555	20 684	3 332
(10) РСФСР	2 142	349	185	181	6 963	807	12 136	1 747
(11) Украинская ССР	692	165	93	158	2 539	297	39.6	46
(12) Белорусская ССР	124	22	14	59	473	56	670	172
(13) Узбекская ССР	156	33	32	65	706	75	795	152
(14) Казахская ССР	175	45	40	24	710	89	1 103	250
(15) Грузинская ССР	71	8	6	7	128	52	397	75
(16) Азербайджанская ССР	56	19	15	8	178	33	214	72
(17) Литовская ССР	30	10	6	15	187	18	31	63
(18) Молдавская ССР	42	14	8	97	238	20	429	51
(19) Латвийская ССР	55	8	6	5	79	11	157	53
(20) Киргизская ССР	28	7	3	3	122	13	253	50
(21) Таджикская ССР	49	4	3	—	109	16	99	53
(22) Армянская ССР	41	10	3	3	225	32	229	67
(23) Туркменская ССР	15	5	—	1	137	11	171	35
(24) Эстонская ССР	24	1	3	2	65	7	64	27

Key:

- | | |
|--|---------------------|
| 1. Palaces and houses of
pioneers and schoolchildren | 12. Belorussian SSR |
| 2. Stations of young technicians | 13. Uzbek SSR |
| 3. Stations of young naturalists | 14. Kazakh SSR |
| 4. Stations of young tourists | 15. Georgian SSR |
| 5. Summer pioneer camps | 16. Azerbaijan SSR |
| 6. Children's music, artistic and
choreographic schools | 17. Lithuanian SSR |
| 7. Children's libraries | 18. Moldavian SSR |
| 8. Children's and youth sport
schools | 19. Latvian SSR |
| 9. USSR | 20. Kirghiz SSR |
| 10. RSFSR | 21. Tajik SSR |
| 11. Ukrainian SSR | 22. Armenian SSR |
| | 23. Turkmen SSR |
| | 24. Estonian SSR |

* Data is given for children's out-of-school institutions in the system of the USSR Ministry of Education

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DEMOGRAPHY

EXTENSIVE SOCIO-DEMOGRAPHIC CENSUS PLANNED FOR 1985

Census Description

Moscow VESTNIK STATISTIKI in Russian No 4, Apr 84 pp 6-11

[Article entitled: "A Task of Great Political Significance"]

[Text] ... To do everything for the development of the economy and social relations, the improvement of the life of people, and to be steadfastly guided in everything by the high Leninist principles -- this is the main task today.

Materials of the December (1983) Plenum of the CPSU Central Committee.

In conformity with the decision of the Politburo of the CPSU Central Committee and the decree of the USSR Council of Ministers, a selective socio-demographic survey of the population will be conducted in January 1985. The preparation and conduct of this large undertaking have been entrusted to the USSR Central Statistical Administration and its organs in the republics, krays, oblasts, cities and rayons.

The forthcoming survey is of great political and national-economic significance. It will make it possible to trace the changes in the composition of the population during the time that has passed after the census of 1979 and to obtain necessary data for the development of the state plans of economic and social development for the 12th Five-Year-Plan and for a longer perspective.

The results of the survey will be a valuable contribution to the broad study of the social and demographic processes occurring in the developed socialist society and will be able to help determine new tasks in regard to securing further growth of the well-being of the Soviet people. Indeed, "all of our efforts in the economy," it was emphasized at the December (1983) Plenum of the CPSU Central Committee, "in the final analysis are aimed at the increase in the standard of living of the people. This is the main socio-political goal of our plans."

Together with other statistical data, the results of the survey will constitute an important part of the information lying at the basis of administration and planning and will serve as a striking illustration of the great socialist achievements.

The program of the survey was prepared by the USSR Central Statistical Administration and its scientific research institutes with the active participation of the USSR Gosplan, the USSR State Committee for Labor and Social Problems, the USSR Academy of Sciences, other ministries and departments, scientists, scientific and practical workers and specialists of various spheres of knowledge. It provides for the receipt of many-sided data on the population that are intended for the analysis of demographic and social processes and the solution of tasks in this sphere which were set by the 26th CPSU Congress and subsequent Plenums of the CPSU Central Committee. In its composition, the experience of the conduct of the census and surveys of the population of the USSR and other countries was taken into account.

Very important questions are included in the program of the survey. They include a group of questions that were given to the population during the All-Union Census of 1979 (relation to the family member registered first,* sex, age, marital status, nationality (natsionalnost'), education, training, source of means of subsistence, social group, as well as questions connected with the study of migration). Such continuity of the program of the survey with the program of the 1979 Census will make it possible to undertake appropriate comparisons and to study changes in the structure of the population during the past 6 years.

It is very important, for example, to investigate questions of population migration and to analyze the results of the policy aimed at the attachment of cadres to the village and the reduction of their drain to the city. It is well-known that, with a view to the further improvement of the social conditions of the village workers, in conformity with the decisions of the May (1982) Plenum of the CPSU Central Committee, the construction of well-built housing, schools, pre-school institutions for children, and clubs is being developed at an accelerated pace in the sovkhoses and kolkhozes and medical, trade and everyday services are being expanded. All of this is conducive to the attachment of agricultural cadres and the reduction of the migration from the village to the city. Transportation also plays a great role in the business of the development of the rural economy and the attachment of cadres.

In the program of the selective socio-demographic survey of the population, there are new topics, the detailed study of which on the basis of a large statistical base will be carried out for the first time. Thus the topic of marriages is intended to produce information about the distribution of those who are married or were married at one time in regard to the time when they entered into marriage, the reason and time of its termination (if a marriage was terminated), and in regard to other indicators. The topic of births is no less important. Data will be obtained concerning the frequency of births by

*The formulation of the question was changed by comparison with the one that was used previously in the population censuses of the USSR: "Relation to the head of the family".

women of different generations, during various periods of time, and on the total number of children which married women intend to have. This topic is closely related to another one, which provides for the obtaining of information on the employment in the national economy or the involvement in studies of the woman during the year of the birth of a child and her use of the maternity leave. The next topic contains questions about the housing conditions of the family. The answers to them will make it possible to obtain information which, in conjunction with data on other topics of the program, will permit the revelation of important interrelations of various demographic and social indicators.

Valuable information will be obtained concerning the average monthly income of the population in 1984.

The information on the population gathered in accordance with this program will be of exceptionally great significance for the development of new measures to increase national prosperity and in conduct socio-demographic research. The materials of the survey will make an important contribution to the assessment of measures connected with the execution of an effective demographic policy, whose goal is to promote the consolidation of the family as the most important cell of socialist society, to create the best conditions for the combination of maternity with the active participation of women in labor and social activity, to improve the support of children and the disabled at the expense of society, to carry out a system of measures in regard to the increase of the life span and labor activity of people, and to strengthen their health.*

The Communist Party and the Soviet State are doing everything necessary for the realization of this policy. Striking evidence of this was the decree of the CPSU Central Committee and the USSR Council of Ministers of 1981 "On Measures to Strengthen State Assistance to Families with Children". It provides for a system of measures aimed at the improvement of the education of children, the granting of greater possibility to the working woman to combine employment in public production with maternity, the reduction of differences in the standard of living of families depending on the number of children, and the creation of favorable conditions for the life and everyday concerns of young families. Much attention is being given to the expansion of the network and improvement of the work of pre-school institutions for children, schools for groups with a prolonged day, and the dissemination of the practice of having women work in accordance with a system of an incomplete work day or work week, in accordance with a schedule involving the operation of many types of nurseries or at home. On-time assistance has been introduced for working mothers or mothers studying with leave from production during the birth of their first child in the amount of 50 rubles, and during the birth of the second and third child--in the amount of 100 rubles. A number of other additional measures are envisaged to strengthen state assistance to families with children.

To carry out the tasks flowing from the decision of the XXVI CPSU Congress in regard to the improvement of the health of people, the CPSU Central Committee and the USSR Council of Ministers in 1982 adopted the decision "On Additional

*Cf. "Materialy XXVI s"ezda KPSS" (Materials of the XXVI CPSU Congress), Moscow, Politizdat, 1981, pp. 136-137.

Measures to Improve Health Protection for the Population", in which large and concrete tasks were set with respect to the improvement of the organization of medical assistance for the population, the strengthening of the prevention of disease, the prevention of traumatism, the sanitation of the environment, and the improvement of the conditions of work, everyday life and recreation of the Soviet people.

At the present time, various measures are being carried out, whose goal it is to promote the growth of the well-being of the people (the improvement of social security, the improvement of the housing conditions of the population, the preservation of the environment, etc.).

The results of the forthcoming survey in accordance with the indicated program will help to assess the effectiveness of the demographic policy being conducted and develop new directions for its improvement. Many questions of the program are directly or indirectly related to the reproduction of the population and to the study of the factors influencing it. The information obtained as the result of the survey will make it possible to investigate on a broad basis the processes of marriage, divorce, the formation and development of families, their stability in various socio-demographic groups of the population, among urban and rural inhabitants.

As a result of the elaboration of the materials of the survey, for example, the following socio-demographic characteristics of the population will be obtained: Distribution of families by size, the number of children, nationality [natsional'nost'], social groups, income, number of persons employed, and dependents; the distribution of women by age and the number of children born in conjunction with being married, nationality, level of education, and employment; changes in the frequency of births of second, third and subsequent children after the realization of additional measures to strengthen state assistance to families with children; the composition of families of different types and the dynamics of the change of this composition; the housing conditions of various types of families and the distribution of family members by sources of subsistence and income; the composition of new settlers and their families; the special features of the formation of the family and the stability of marriages among migrants and persons living constantly in one place; the frequency and reasons for the development of incomplete families.

In addition, the survey program envisages the receipt of information about the opinion of the population [about] which of the social tasks must be solved first of all: The improvement of the supply of food products, the assortment and quality of industrial goods, the improvement of housing conditions, medical services for the population, and others.

During the period of the survey, information will also be gathered on the composition of the population of working age (men 16-59 and women 16-54) which is employed in housework and subsidiary farming and is not studying. The special questionnaire developed for this purpose contains questions on the sex, age, level of education, specialty or vocation and the conditions under which those wanting to work could take part in public production (assignment of work close to the place of residence, work with an incomplete work day,

or at home, etc.). For women it will be indicated how many children under the age of 16 there are and whether they require arrangement in pre-school institutions for children, boarding schools or groups with a prolonged day.

This information, along with other results of the survey, will yield important material for studying the question of the utilization of labor resources. As is well-known, their natural growth during the current decade is declining substantially and the possibility of involving in public production the part of the population of working age not employed in it is acquiring great significance. It goes without saying, this part is not numerous, for according to the data of the 1979 Census the entire population employed in the public sector (including students with a leave from production) in proportion to the total population of working age almost reached "the ceiling". The basic part of the non-working and non-studying population of working age at the present time is composed of women, who, as a rule, temporarily interrupt their work activity after the birth of a child, and women with large families.

The main factor of economic growth is, of course, the further increase of labor productivity and the rational use of manpower. The necessity of the rational utilization of material and labor resources was given special attention at the November (1982) Plenum of the CPSU Central Committee: "The continuation of the work with respect to the increase of the efficiency of the national economy is envisaged--the strenuous tasks must be fulfilled with a comparatively smaller increase in material expenditures and labor resources." The State Plan of the Economic and Social Development of the USSR for 1981-1985 projects that in the 11th Five-Year-Plan 90 percent of the increase in national income will be secured through an increase in labor productivity.

Thus, two documents will be utilized in the course of the survey: The survey form, which contains basic questions of the program; and the questionnaire for persons of working age who are employed in the household or in the private subsidiary sector and who are not studying.

The survey will be conducted as of 1 January 1985 by means of questioning 5 percent of the constant population of the country during the period from 2 January through 11 January by specially-trained workers (counters). They will be enlisted, as during the population census of 1979, for a short time from enterprises, institutions and organizations.

The selective survey will be conducted throughout the territory of the USSR, with the exception of the regions of the Extreme North and other regions with which communication is difficult in January. The election districts for elections to the USSR Supreme Soviet serve as the basis for the selection and formation of the selective totality. According to the special program, every 20th election district within the limits of a union republic (without oblast division), ASSR, kray, and oblast. In the districts selected, the entire population living permanently on their territories is surveyed. Moreover, the entries produced on the survey form as well as on the questionnaire will be utilized only for the receipt of summary data on the composition of the population according to the established program. The workers doing the survey--the counters, instructor-controllers, and others--are prohibited from communicating to anyone the content of the written answers.

In connection with the forthcoming socio-demographic survey of the population, great responsibility has been placed on the organs of state statistics for the successful completion of all measures for its preparation, conduct and the elaboration of the materials obtained. As the experience of the past censuses and surveys shows, the guarantee of success in the execution of such large statistical projects is the timely and accurate organization of the entire enterprise.

At the present time, the preparations for the survey are underway in our country. They are being realized in conformity with the approved Basic Provisions of the Organizational Plan for the Preparation, Conduct and Elaboration of Materials of the Selective Survey and in conformity with the calendar plan of work.

The directors of the Central Statistical Administrations of the union republics and the statistical administrations of the ASSR's, krais, oblasts and cities must strengthen the subdivisions that are directly engaged in work on the preparation of the survey.

The success of the survey in every region and city will depend mainly on the qualitative composition of the counters and instructor-controllers. Their selection and training must be given the most serious attention. For the chiefs of the rayon (city) information-computer stations (centers) and the inspectors of state statistics it is expedient to project in good time from which enterprises, institutions and organizations they will enlist such workers and to establish the appropriate contact in this regard with the administrations of the enterprises and organizations. It is very important that the survey be conducted by the most active, conscientious, cultured, educated and disciplined people, who have learned its goal and tasks well and who are able to complete this work on a high level.

Taking the reserve into account, a total of more than 50,000 people will be selected and trained.

The entire personnel of the survey, which is enlisted from enterprises, organizations, kolkhozes, sovkhoses, and educational institutions, as well as the leading workers and specialists of the statistical organs who will take part in the survey of the population, are going through careful training. At specially organized instruction conferences and seminars during the period from April to December 1984, organizational and methodological questions of the survey will be studied in detail, as well as its entire documentation. In ascribing great significance to the quality conduct of the survey, the USSR Council of Ministers considered it necessary through its decree to free, for set periods of time, persons who are being enlisted in the preparation and conduct of the survey, from their basic work in enterprises, institutions and organizations and to prohibit the corresponding administrators from recalling or replacing these persons after their training. The strict observance of this will secure the organization and success of the survey.

For the efficient realization of the preparatory work and the correct placement of personnel, the territories of the selected election districts are subdivided into counting districts. This work will be conducted by the chief of the

RIVS(Ts) [Rayon Information-Computer System (Center)], the GIVS(Ts) [City Information-Computer Station (Center)], and the inspector of state statistics on the basis of data on the numerical strength of the population in the election district and the average norms of the work load per counter and instructor-controller. In urban settlements, a counter must survey an average of 300 people during 10 days; in a rural locality, taking into account the time expenditure for movement between populated areas, a counter surveys an average of 250 people during the same number of days. The work load norm for counters for republics, krays, oblasts, cities and rayons will be differentiated taking into account the character of the separation of inhabitants in the populated areas and the natural-geographic conditions, i. e., it will be increased in densely-populated areas with multi-story building of housing complexes and lowered or left on the average level for the country in other populated areas. The work of the counters is guided by the instructors-controllers; an instructor district is created when there are 8-10 counting districts. If a smaller number of counting districts is formed in a rayon, an instructor district is not created, and the work of the counters is directed directly by the chief of the RIVS(Ts), the GIVS(Ts), the inspector of state statistics, or the deputy chief (inspector) for questions of the population survey.

On the eve of the survey (28 and 29 December 1984), the appropriately trained counters must in a preliminary way make the rounds of their district and adjust the information about the house ownerships and rural populated areas entered earlier by the instructor-controller in the note-book of the counter. During this period, the counters are in every housing facility, get acquainted with the residents, and tell them about the forthcoming survey, its significance and the procedure for its conduct, and arrange with the citizens when, during the period of the survey, it is most convenient to come to them to administer the questionnaire and take down the information.

In the course of the 10 days (2 through 11 January), during which the survey will be conducted, the workers of the organs of state statistics must carefully follow the course of its conduct, extend practical assistance, verify the correctness of the entries, and in time (quickly) take measures to correct mistakes.

After the survey the materials must be carefully received and verified. All the work must be carried out precisely in accordance with the approved instructions and within the established time limits. The chiefs of the Central Statistical Administrations of the union republics, the statistical administrations of the ASSR's, krays, oblasts, and cities, the chiefs of the RIVS(Ts) and the GIVS(Ts), and the inspectors of state statistics are responsible for the organization, conduct and timely presentation of quality survey materials for the corresponding territory.

In accordance with the decree of the USSR Council of Ministers, the results of the selective socio-demographic survey of the population must be presented within the established deadlines for use in the composition of the draft State Plan of Economic and Social Development of the USSR for the Years 1986-1990. This places high responsibility on the workers of the state statistics organs for the skillful organization of a large collective of survey personnel, its mobilization for the successful execution of the task that was set, the pre-

cise and harmonious work in every stage of the preparation, conduct and working out of the survey materials. The Administration for Censuses and Surveys of the population, Soyuzmashinform [not further identified] of the USSR Central Statistical Administration, the statistical administrations of the union republics and the statistical administrations of the oblasts must direct special attention to the timely and quality preparation of the materials of the survey for mechanical processing (completion, coding, etc.), to their elaboration in accordance with the established program and the presentation of the results within the strictly established time limits. At present it is necessary once again to verify the course of the fulfillment of the calendar plan of work, the output of documentation, the readiness to conduct the instruction meetings and other immediate measures.

It must be underscored that the success of the enterprise in many respects will depend on how widely and actively the explanatory work is organized among the population concerning the tasks and the political and national-economic significance of the survey. The citizens of our country must be well-informed about its goals, procedures and time limits of conduct. For this, it is necessary to make use of the press, radio and television, and in the territories of the election districts that were selected and where the entire permanently-residing population will be surveyed, it is also necessary to organize the conduct of lectures, speeches and discussions.

A task of great political significance has been set by the Politburo of the CPSU Central Committee. It is a debt of honor of the workers of state statistics, on whom the responsibility for the conduct of the survey rests, to prepare for it in good time and to carry out all of the work on a high ideological-political and organizational level.

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Nationality Determination

Moscow VESTNIK STATISTIKI in Russian No 4, Apr 84 pp 23-28

[Article by L. Kuvshinova, junior scientific associate of the Department of Demography of the Scientific Research Institute of the USSR Central Statistical Administration: "A Method for Calculating the Nationality Composition of the Population in the Inter-Census Period"]

[Text] At the present time the study of demographic processes is acquiring increasingly great urgency. Research into socio-demographic factors in their interrelationship with the processes of population reproduction and migration have received a new impetus. Of great significance is the complex of questions connected with the development and practical realization of demographic policy measures, as well as the assessment of their effectiveness for the country as a whole and for its individual regions. Further prospects for the improvement of the planning of the economic and social development of the country and the execution of thorough demographic research are opening up in connection with the selective socio-demographic population survey forthcoming in 1985, which will make it possible to obtain new valuable data on the numerical strength and composition of the population of our country in the inter-census period.

As is well-known, detailed information on the national composition of the population of our country are obtained in the All-Union Population Censuses that are conducted periodically--once every 10 years. However, in the development of the state plans of the economic and social development of the country, scientifically-based data on the numerical strength and composition of the population in the years between censuses are necessary since the national composition of the population of the country and its individual territories changes rather quickly.

In the present article a number of methods are suggested, with the aid of which the numerical strength of the population of individual nationalities of the USSR as a whole, the union republics, the city and village, can be calculated on the basis of the materials of the All-Union Population Census of 1979 and the current estimate of population movement. Such information for the basic nationalities can be obtained annually, the methodology envisaging the conformity of the obtained data on the nationalities and the current estimate of the total number of the population for the country as a whole and for each of its regions, as well as from the territorial standpoint for the urban and rural population.

To determine the numerical strength of the basic nationalities of the union republics, they at first calculate the numerical strength of the population for the USSR as a whole, they regard the obtained results as a limitation for all subsequent calculations, and they then calculate the numerical strength of the urban and rural population of the union republics. If it is necessary to calculate the numerical strength of the basic nationalities by oblasts, then it must beforehand be calculated for the republic. The obtained results will serve as a limitation for the calculation with respect to oblasts. The methodology may also be used for the estimation of the national composition of the individual territories and for the calculation of the nationalities, which are singled out in the current registration.

The general scheme for the calculation of the number of persons of any nationality may be presented in the following form:

$$S_{t+1} = S_t + N - M \pm V \pm H. \quad (1)$$

The number of persons of a given nationality at the beginning of the following year (S_{t+1}) is the sum of the number of persons of this nationality at the beginning of the year (S_t) and those born during the course of the year (N) less those who died during the year (M) with correction for the changes in the number of persons of a given nationality as the result of migration growth ($\pm V$) and the transformations of rural population areas into urban ($\pm H$) for the same period.

We note that the information about the number of persons of every nationality for the USSR as a whole and the union republics, necessary for the beginning of the calculation, are taken from the data of the All-Union Population Census (in the materials of the elaboration of the census of 1979, this is Table 9s) or from the results of the calculation of the preceding year. In the cal-

calculation according to the data of the population census, if it is timed not as of the beginning of the year (for example, as of 17 January 1979), a correction must be made, taking into account the share of births, deaths, and migrants applying not to the entire year, but to the part of it remaining after 17 January, since the remaining data are taken for the full year.

However, by far not in all cases are the basic components going into the calculation scheme secured by statistical information. Thus, in the calculation for the USSR, the data on the natural movement of the population with respect to 15 basic nationalities of the union republics are available in Form No 3--"Information on Births and Deaths by Nationalities". However, at the level of the republics, only 5 of the basic nationalities (Russians, Ukrainians, Belorussians, Uzbeks and Kazakhs) are singled out in this form, but, in addition, in every republic the basic nationality of the given republic (if it is not included among the indicated 5 nationalities) and also several more numerous nationalities are singled out. Thus, for example, in all republics of Central Asia and Kazakhstan, in addition to the nationalities indicated above, the Kirghiz, Tajiks and Turkmens are singled out; in the republics of Transcaucasia--the Georgians, Armenians, and Azerbaijanis; in the republics of the Baltic and in Belorussia--the Latvians, Lithuanians and Estonians; In Moldavia--the Moldavians.

For the calculation, the numbers of births by nationalities, singled out in all union republics (pN) and in some union republics (^{-p}N), are taken from Form No 3 for the corresponding territories.

But the number of deaths by nationality in those union republics where the given nationality in Form No 3 is not singled out (^{-p}N), must be determined through estimation. The estimate is based on the assumption that the level of the birth-rate for a given nationality is identical throughout the territory of the USSR. Proceeding from this, a conditional birth-rate coefficient for every nationality singled out only in some union republics is calculated on the average for the union republics where the given nationality is singled out in Form No 3. The conditional birth-rate coefficient is calculated in the following way:

$$K = \frac{\sum^p N}{\sum^p S} \quad (2)$$

where pS — is the number of persons of a given nationality according to the materials of the census or calculation; the summarization is carried out for all republics where the given nationality is singled out in Form No 3. The number of births by the mothers of a given nationality in every union republic, where this nationality is not singled out in Form No 3, is determined as

$$^{-p}N = ^pK \cdot ^{-p}S \quad (3)$$

where ^{-p}S — is the number of persons of this nationality in the given republic according to the census or calculation.

The number of births of other nationalities (N_{np}) for every union republic is determined as the difference of the numbers of births (column "Others" of Form 3) and the sum of the numbers of births of the basic nationalities who are not singled out in the indicated form for a given republic (i. e., the sums of the numbers of births, formula (3).

$$N_{np} = N_{np.\phi} - \sum_{-p}^{-p} S \cdot {}^pK. \quad (4)$$

The summarization is produced for all nationalities not singled out in Form 3 for a given republic.

Thus, the total number of births in a given year is made up of the following components:

$$N_r = N + {}^pN + {}^{-p}N + N_{np}. \quad (5)$$

The number of births of every nationality for the USSR as a whole is determined as the sum of the births of a given nationality for the union republics. In so doing, this does not cause difficulties for the nationalities that are singled out in all union republics, but for the remaining ones preliminary calculations are necessary which have already been discussed.

The number of deaths by nationalities (M_r) is calculated the same way as the number of births. Analogously the number of deaths in the republics, where a given nationality is not singled out (M^{-p}) in Form No 3, is determined by way of estimation with the assumption that the level of the death-rate for the given nationality is identical throughout the territory of the USSR. Like the calculations of the number of births by nationalities, the number of deaths of a given nationality in the USSR as a whole is determined (for nationalities, singled out in Form No 3, of all republics) as the sum of deaths of a given nationality by union republics, but for nationalities not singled out in Form No 3--correspondingly as the sum of deaths obtained as the result of auxiliary calculations.

Certain difficulties are connected with the calculation of migration by nationalities. The character of the calculation of migration for the time being permit the calculation of migrants by nationality for the urban and rural population in a direct manner. The corresponding magnitudes can be obtained only indirectly. In so doing, it must be taken into account that the number of all nationalities by city, village and union republics, taking migration into account, must coincide with the numerical strength of the population of these territories, obtained through the usual current calculation of the numerical strength and age-sex composition of the population.

Thus, in the calculation of the numerical strength of the individual nationalities the migration growth must be taken into account that is put into the calculation of the total numerical strength of the urban and rural population. Proceeding from this, it is expedient to calculate the migration not according to direct data about the number of arrivals and departures by nationalities, but in accordance with the indicator of migration growth V_m . The magnitude

V_n by nationalities is taken from Form No 5 (sheet 3) "Distribution of Arrivals and Departures and Mechanical Growth by Sex and Nationality".

Since the migration growth of the urban population that is put into the calculation of the total number $(^{(1)}V_o^{rop})$, as a rule, does not coincide with the sum of the migration increases of the urban population by nationalities, the latter are corrected in such a manner that, for every republic, the sum of the magnitudes of migration increases by nationalities would be equal to the migration growth put into the calculation of the total numerical strength of the urban population. The corrected $(^{(3)}V_n^{rop})$ is determined as follows:

$$(^{(3)}V_n^{rop}) = \frac{(^{(1)}V_o^{rop})}{\sum_n V_n^{rop}} \cdot V_n^{rop}. \quad (6)$$

The migration growth of the rural population by nationalities for a given republic must correspond to the migration growth of the rural population put into the calculation for every republic. At the same time, the sum of the migration increases of the rural population of the USSR for all nationalities must coincide with its total migration growth.

In conformity with this, to calculate the migration growth of the rural population of individual nationalities, a coefficient of intensity of departure from the village is at first determined for every nationality for the USSR as a whole:

$$L_n = \frac{\sum_{15} V_n^{rop}}{\sum_{15} S_n^{cea}}, \quad (7)$$

where S_n^{cea} is the number of the rural population of a given nationality;
 V_n^{rop} is the migration growth of the urban population of a given nationality (since the sum of the migration growth of the urban population for the USSR is the number of arrivals in the city from the village), i. e.,

$$\sum_{15} V_n^{rop} = \sum_{15} V_n^{cea}. \quad (8)$$

Then the migration growth of the rural population by nationalities is conventionally determined for every republic:

$$(^{(2)}V_n^{cea}) = S_n^{cea} \cdot L_n. \quad (9)$$

The obtained numbers are summed up by nationalities for every republic:

$$\sum_n (^{(2)}V_n^{cea}). \quad (10)$$

The difference between the migration growth for the village, put into the calculation for a given republic, and the sum of the standard increases for all nationalities is determined. Then the standard migration increase from the village for every nationality is corrected by this difference (the method of correction may be selected in the course of concrete calculations). As a result, we obtain data on the migration growth for the village for every nationality, which are coordinated with the migration growth put into the calculation of the total numerical strength of the rural population.

The calculation of changes of the nationality composition of the population during territorial reorganizations has its distinctive features.

The nationality composition of the population of the rural settlements that are transformed into urban (H_n) settlements may be calculated either on the basis of census data on the national composition of the entire population of one republic or another, or on the basis of the data of the calculation of the preceding year. The numerical strength of the population in settlements that have changed their status is known for every republic. The number of persons of any nationality in these settlements is determined in accordance with the ratio of persons of a given nationality in the rural population of the minimum territorial unit for which such a ratio is known in the given year:

$$H_n = H_o \frac{S_n}{S_o}.$$

From the number of the rural population of a given nationality obtained with regard to birth-rate, death-rate and migration, the number of the rural population of the corresponding nationality in the settlements that have been transformed into urban settlements is subtracted and is added to the number of persons of the corresponding nationality in the urban population.

After all remaining components--the beginning number of persons of a given nationality S_1 , the total numbers of deaths-- M and births-- N of a given nationality for the period of the calculation, corrections for migration-- V and territorial reorganizations-- H --have been determined, the numerical strength of the national composition of the population is calculated in accordance with formula (1).

The methods set forth above are intended for the receipt of estimates of the numerical strength of the individual nationalities without regard to the age structure, since in the development of the data on deaths from the viewpoint of nationalities age groups of the same age are not taken into account, and the data on migrants in conjunction with their nationality and age are not elaborated. In the presence of corresponding data, an analogous calculation is possible also for individual age groups.

It must be noted, however, that in the methodology we have developed not all components of changes of the national composition of the population are taken into account, and the estimates being obtained do not reflect the changes in nationality composition due to strictly ethnic processes, in particular ethnic

assimilation. For this reason, although--given the available information and the existing procedure for estimating ethnic membership--the described method may be considered to be the solely possible method of calculating the numerical strength of the nationality composition of the population in the inter-census period at the present time, it does not guarantee strict coincidence of the calculated data with the data on the nationality composition of the population in a future census because of special features of the calculation and the specific character of these processes.

Possible sources of discrepancy are related to differences in the accounting of nationality in the census and in the current procedure. Thus, in the 1979 Census, nationality was registered from the words of those surveyed, moreover the nationality of children--from the words of the parents*, and in those cases when the parents were of different nationality and found it difficult to determine the nationality of the child, preference was given to the nationality of the mother. The number of such cases was not taken into account. The distribution of births in the current calculation of ethnic membership was undertaken on the basis of the nationality of the mother.**

The nationality of a person who died is registered in accordance with his/her passport, and in the absence of a passport--on the basis of the testimony of a person making an official declaration or in accordance with the data of the home record [pokhozyaystvennaya kniga]. Upon receipt of a passport, the nationality of one of the parents is registered in it in accordance with the birth-certificate. For children who died before the age of 1, the nationality of the mother is registered in the death-certificate.

Thus, the following discrepancies between the results of the estimate and the data of the census are possible:

- a) A person, who in the 1979 Census indicated any one nationality, may in a future census may count himself as belonging to another nationality. In the current procedure, the change of his ethnic self-consciousness is not, and cannot be, taken into account;
- b) a child, taken into account in a census, grows up and in the subsequent census may not name the same nationality for which he was registered by his parents in the past census. Although there are no reasons to suppose that a young person, in determining his ethnic membership, will approach this from different positions than his parents;
- c) a juvenile, who has reached the age of 16 during the inter-census period, upon receiving his passport, may indicate (and then name in a census) a different nationality than the one for which he or his parents registered;

*) The instruction did not indicate up to what age the nationality of children is determined by the parents. It may be assumed that in the majority of cases the answer to this question, as well as to others, of the census program for children under the age of 16 was given by adults.

**) On the basis of the data of the current estimate of births, information can be obtained on the distribution of births by the nationality of the father and by combination of the nationalities of parents, but such an elaboration is not being produced.

d) the nationality indicated by the person surveyed in the census may not coincide with the one registered in his/her passport, and, therefore, in the case of death, the individual will be included among the dead of the nationality which is indicated in the passport;

e) for a child, who is taken into account by the census and then died before reaching the age of 1, the nationality of the father may be registered in the census, but in the death-certificate--that of the mother;

f) a child, who was born after the census, will be counted among the births according to the nationality of the mother, but in a future census the nationality of the father may be indicated for him/her by the parents (or by him/herself). In the determination of ethnic membership, preference is frequently given to the nationality of the father, not the mother. It is a well-known fact that, in cases where one of the parents belongs to the nationality that is predominant in a given locality, it is precisely this nationality which is indicated for children in the census, regardless of which one of the parents belongs to it.

Thus, the possibility of discrepancies (a) and (b) is conditioned by the process of ethnic assimilation, (c) and (d)--by the procedure of re-registering nationality when the passport is obtained, and (e) and (f)--by the differences in the procedure of calculating ethnic membership in the census and in the current record of demographic events.

The ethnic processes of assimilation and consolidation of nations cannot be taken into account in the proposed scheme for calculation in view of the absence of any kind of quantitative estimates of their prevalence.

The discrepancies examined above may in part be mutually compensated. For this reason it may be assumed that in sum they will be relatively small and as a whole will not exert significant influence on the results being obtained.

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SPECIAL FEATURES OF AZERBAIJAN MIGRATION DESCRIBED

Baku IZVESTIYA AKADEMII NAUK AZERBAYDZHANSKOY SSR: SERIYA NAUK O ZEMLE in Russian No 3, Mar 84 pp 111-115

[Article by R.I. Umudova: "Special Contemporary Features of Migration Activity among the Population of the Azerbaijan SSR"]

[Text] The modern development of society makes constant demands on the study and calculation of the territorial distribution of population. The development and allocation of productive forces is directly linked with the shaping of the population and with the change in natural and migration movement. In turn, the migration movement of the population has turned into a basic factor of its territorial redistribution and exerts a marked influence on the provision of the national economy with labor resources. The frequently observed disparity between manpower and the means of production in national production is widened through population shift, i.e. migration. Thus, exposure of the consequences of migration processes, establishment of the geography of migration connections and their analysis require constant research. In addition, special importance is acquired by questions of the regulation of migration movement of the population, which are reduced to the increase in economic effect of migration processes and the direction of the flow of capacities in the required direction.

In terms of the character of migration processes of the population in the past, as well as in the present, the Azerbaijan SSR is sufficiently typical. In comparison with the other republics, it is noted for significant intra-republican differences in economic activity and for particular features of settling.

The reduction in natural population growth observed in recent years in the republic, particularly in mountain areas, has strongly influenced the general movement of population in the republic. The influence of migration processes on the developmental character of the republic's population is quite marked and they exert a direct influence on demographic processes: the change in population figures, the course of natural movement, aging and the change in median age structure of the population. As a result of migration movement, in some rayons of the republic, the population is constantly drawn from the outside, while in others, a lack of labor resources is experienced because of outflow. The problem of labor resources in the republic under modern

conditions of development is becoming actual in connection with the resolutions advanced in "Basic Directions of Economic and Social Development in the USSR for 1981-1985 and for the Period up to 1990" where stress is laid on the imperative necessity of also continuing in the future to improve the structure of industry in the Azerbaijan SSR by means of advanced development of electrical engineering, instrument building, radio engineering, electronic and other industrial sectors, ensuring a fuller utilization of labor resources. In the matter of the resolution of tasks concerning the national economy set before the republic, along with other demographic processes, it is quite important to expose the character and reasons for migration processes, to which G.A. Aliev drew the public's attention in his report at the 30th congress of the Azerbaijan CP. He noted that "in the years of the 11th and 12th Five-Year Plans, it is imperative to ensure the further improvement in allocation of productive forces. This concerns conformity to the plan in the equalization of levels of economic development in different zones and rayons of the republic where there is a high proportion of able-bodied people who are not occupied in national production, while its mobile part, especially young men, strive, on the whole, to obtain work in Baku. Among other difficulties, this creates demographic complications for the future growth of the population. It is very important to develop new production or territorial-production complexes in the cities of the republic, connected among themselves by production cooperation. It is equally important to establish branches of large enterprises in rural areas, which will also improve the structure of employment."

For the last ten years, the ongoing scales of migration of the republic's population remain quite considerable. The greatest migration connections by volume are in intra-republican shifts between the city and the village and, in extra-republican shifts, with neighboring economic regions.

For Azerbaijan as a whole, up to the first half of the intercensus period, a favorable migration balance was characteristic. But in subsequent years, the observed outflow of the population from the republic, although barely noticeable in its influence on the general growth and density of the population, to some extent changed the character of migration processes both within the republic and in the redistribution of the population on the inter-republican scale. Thus, if the total population of the Azerbaijan SSR, according to the data of the 1959 census, was 3698.0 thousand, in 1974 it was 5570.0 thousand, i.e. an increase of 49 percent. The volume of outflow of the population for this period was 94.9 thousand, while the growth rate of the population due to this factor was reduced to 2.6 percent.

Great changes have occurred in the shaping of the mountain population. Population figures for mountain areas have increased markedly. During 15 years (1959-1974), in mountain areas, the average annual population growth was 70.2 thousand, while the average annual growth rate was 3.15 percent. The comparison of growth rates in urban and rural areas indicated that relatively high population growth rates in cities are connected, on the whole, with migration processes and the transformation of rural population points into urban ones. Due to the factors mentioned, the growth rates of urban population increased by 22.9 percent (16.9 percent due to population migration and 6.6 percent due to transformation of rural population points). Such a

strong influence of the process of migration with respect to mountain areas is explained by the influence of the development of productive forces in various rayons.

An analysis of the index of reduction of the overall population figures due to migration permits the conclusion to be drawn that, with the exception of the Apsheronskii economic Rayon, there is a negative migration balance everywhere else.

The degree of concentration in the Apsheronskii economic Rayon of a basic production core, a majority of the institutions of higher, middle and special education, as well as a sphere of services and management, promote an increase in the inflow of population.

Thus, a disparity in the uniform provision of the whole economic complex of the republic with respect to manpower has become manifest. Such a disproportion began to manifest itself more tangibly with the conversion of projects, during the years of the last five-year plan, for the dispersal of the production potential of the republic from the old industrially developed rayons to another part of the territory, less inhabited, but with promising qualities for future development.

The Azerbaijan SSR, in comparison with other union republics, is characterized by relatively high population growth rates that are conditioned by natural population growth, explained by the natural growth and outflow of the population outside the republic.

The average annual population growth for the second inter-census period was 1.84 percent, while the population of the republic increased by 911,000, notwithstanding the negative balance of migration in inter-republican movement. The developing situation could not but affect the general demographic development of the republic. Great changes continue in the distribution of the population between city and village - the proportion of urban population predominates over that of the village, internal migration occurs and intra-republican migration increases. Thus, in comparison with 1959, in 1979 the proportion of city-dwellers increased from 48 percent to 53.1 percent, which proves an intensive process of urbanization and an increase in the proportion of city-dwellers due to population migration. In the general growth of population figures for cities, the size of migration growth has already had a rather large significance. The predominance of migration growth over natural growth is especially marked in the large cities. Thus, the population of the capital, Baku, increased by more than 50 percent for the period mentioned due to this factor.

The rural population of the republic for the same period increased primarily because of natural growth, despite the fact that some of this population also took part in the migration outflow from rural areas.

In the process of intensive migration of the population of the republic, great demographic changes occurred in the places of moving in and departure. In

some places, the population became younger, in others, older; the sexual structure also changed.

In characterizing the contemporary special features of the migration process, we consider it imperative to stress once more that it is expressed more within the territory of the republic and is marked by an intensive exchange between rural and urban areas, as well as by an inter-city population shift. In Azerbaijan as a whole, people migrating from rural to urban areas comprise the basic proportion of the general flow of all migrants. For that reason, the population shift in the direction "village - city" quite fully characterizes the basic special contemporary features of the internal migration of the republic's population. With the growth of the intra-republican migration of the population, its redistribution role grows as well.

In the conditions of the Azerbaijan SSR, comparatively large population migration scales are characteristic. According to the data of current statistics, the general figures on urban population involved in the migration process, for 1959-1979, constitutes a significant figure for the republic. A comparison of the yearly migration circulation with the average annual figures on urban population indicated that, on the average, its size is quite stable for the year.

An important distinguishing feature of the modern period of migration movement of the population of the Azerbaijan SSR is the predominance of the proportion of internal migration and its significant effect on the redistribution of the population and labor resources.

Intra-republican migration, which furthers a redistribution of the population between urban and rural areas and between individual rayons of the republic has a tendency to growth and, in comparison with internal migration, is marked by a relatively large scale.

Among migrants, young people predominate (especially the group between 20 and 24), which is explained by the basic desire to continue studying and to obtain a profession and employment. Men demonstrate the greatest mobility, which is explained by the formation of our national structure. In recent times, however, some increase in the number of women has been noted, especially among those who are guided to study. The overwhelming majority of migrants have a secondary education.

Intra-republic (internal) migration of the population occupies an important place in the territorial redistribution of the republic's population. There is quite a wide geographical distribution of migrants. The migration connections of the Azerbaijan SSR with individual union republics and with economic rayons are marked by size and level of intensity. The closest interconnections are implemented with the territories of the Transcaucasian republics and the Daghestan ASSR. An analogous picture of the redistribution of migrants is observed in connections with the RSFSR, the Uk.SSR and the republics of Central Asia. The Azerbaijan SSR is connected in equal measure with the other republics and economic rayons. In inter-republic migration

connections, especially during recent years, the Azerbaijan SSR is marked by the relatively small extent of its connections with all the republics that have a predominant outflow of population. Characterizing the special contemporary features of the internal migration of the population of the Azerbaijan SSR, it must be stressed that there is an attractive influence exerted by a number of regions of opening and settlement, such as Siberia, the Far East, newly constructed areas of Kazakhstan and Central Asia, i.e. places where there are no special problems of finding employment.

In the study of the migration of the population of the Azerbaijan SSR, it is especially important to evaluate the national composition in both intra-republic redistribution and inter-republic connections. In general volume, Azerbaijanis who move constitute approximately 54 percent, Russians, 26 percent, Armenians, 9 percent, and other nationalities, 11 percent.

The tendency we have observed regarding outflow of the population on an inter-republican scale is basically connected with employment placement. Regarding the correlation of the changes in scales of intra-republican and inter-republican migration, one may assume that the scales of the former will predominate, in connection with which we consider it expedient to make a thorough study of this complex process in order to regulate and direct it in the future.

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